DOCUMENT RESUME

ED 078 985 RC 007 092

AUTHOR	Wilber, George L., Ed.; Bishop, C. E., Ed.
TITLE	Rural Poverty in the United States. A Report by the President's National Advisory Commission on Rural Poverty.
INSTITUTION	National Advisory Commission on Rural Poverty, Washington, D.C.
PUB DATE	May 68
NOTE	606p.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 ($5.75)
EDRS PRICE	MF-$0.65 HC-$23.03
DESCRIPTORS	Agriculture; *Economic Disadvantagement; Family Planning; Health Services; Local Government; *Migration; Natural Resources; Negroes; *Rural Areas; *Rural Urban Differences; *Unemployment

ABSTRACT

Papers prepared for the National Advisory Commission on Rural Poverty are presented in this report. These papers provide the Commission background information for recommendations submitted to the President of the United States. Major topics covered include the structural changes taking place in rural areas and the inter-relationships between rural and urban America; occupational mobility and migration; health care and family planning; the developmental nature of agriculture and other natural resource industries; the ecnomics of poverty; and policies and programs to alter income distribution. Other papers prepared for the Commission but not published are listed in the appendix. (PS)

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RURAL POVERTY IN THE UNITED STATES

A Report by the
President's National Advisory Commission on Rural Poverty

RC 007092

Washington, D.C.

Issued May 1968

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Preface

This report contains papers prepared for the National Advisory Commission on Rural Poverty. These and other papers provided background information for the Commission in arriving at the recommendations submitted to the President in its report *The People Left Behind*. Most of the papers included here report on recently completed research. Not every facet of rural poverty is covered, but the papers nevertheless represent an important contribution to understanding problems of rural poverty and provide insights toward possible solutions.

Part I centers on rural people and their communities. Particular attention is given to the structural changes taking place in the rural areas and the interrelationships between rural and urban America.

Part II treats occupational mobility and migration. Emphasis is placed on the transfer of labor between farm and nonfarm employment with special consideration of the problems of achievement, migration, and assimilation in urban centers.

Part III is concerned with health care and family planning. Emphasis is placed upon the relative lack of medical facilities and services in rural areas and upon possible means of expanding family planning programs in rural areas.

Part IV focuses upon the developmental nature of agriculture and other natural resource industries. Special consideration is given to the employment potential of these industries.

Part V is concerned with the economics of poverty. Emphasis is placed upon problems of measuring poverty and projecting future poverty. Consideration also is given to the income distribution effects of the way in which the economy operates and to policies and programs designed to alter income distribution.

The views expressed in these papers are those of the authors, and they do not necessarily reflect the views of the Commission. In like manner, although these papers were valuable to the Commission, the authors of papers in this volume should not be held responsible for the recommendations of the Commission.

In addition to the papers in this volume, other papers prepared for the Commission, but not published, are listed in the appendix. Persons interested in these papers should contact the authors directly.

This volume of published papers has been edited by George L. Wilber and C. E. Bishop of the staff of the National Advisory Commission on Rural Poverty.

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PART I

Rural People and Their Communities

Chapter 1

Rural People and Their Work[1]

Population

Historical Summary

When the first Federal census was taken in 1790, the rural population consisted of 3.7 million persons. This represented 19 in every 20 Americans. As the Nation developed, the rural population expanded steadily. It continued to be larger than the urban population for nearly a century and a third. The first census to show that the country had become predominantly urban was that of 1920 when the urban population numbered 54.3 million as compared with 51.8 million rural.

For years, the rural population was considered to be practically the same as the farm population. The rural population today, however, contains millions of people who have little or no connection with agriculture. These people work in manufacturing, mining, or recreation; are retired; or are at colleges, institutions, and military installations in rural areas. Another part of the rural population consists of persons whose lives are closely linked with agriculture, yet who do not live on farms. They include farm laborers, agricultural processors, and suppliers of farm equipment.

In 1920, farm people comprised 61 percent of the rural population. Since that time, the farm population has declined almost steadily. Farm residents have been characterized by rather large families, but continued heavy outmigration from farms has produced farm population declines. On the other hand, the nonfarm component of the rural population has increased. Nonfarm rural people live in villages and places of less than 2,500 inhabitants, and in nonfarm homes in the open country.

From 1920 to 1940, the urban population increased by 38 percent, while rural residents increased by only 11 percent. Within the rural population, the nonfarm rate of growth was nearly as high as the urban, while the number of farm people declined only slightly as the great depression of the 1930's retarded off-farm migration.

Between 1940 and 1950, during World War II and postwar reconversion, the urban growth rate more than doubled its previous level, while the rural population had no growth. However, unprecedented changes were taking place within the rural population. The farm population declined by nearly a fourth as several factors combined to draw millions of people away from the farm. Rapid mechanization of farming, military service, the great expansion of industrial activity, and the extension of industrial plants into rural areas each played a part in influencing a net of more than 11 million people to move off the farm, or, at least, to abandon agriculture. From the 1940 level of 30 million, the farm population was down to 23 million by 1950. Concurrently, the nonfarm component of the rural population continued to expand. The shift from farm to nonfarm in the rural population proceeded so rapidly that the nonfarm rural population, which comprised less than half of the rural total in 1940, constituted about 60 percent in 1950.

During the 1950's, the urban rate of growth reached the high levels of the beginning of the century when urban ranks were swelled by large numbers of immigrants. The rural population, on the other hand, remained almost stationary, despite the continued substantial growth of the nonfarm rural population. Farm residents had decreased in number to little more than a fourth of the rural total by 1960. Precise comparisons of farm population data over the decade of the 1950's are difficult because of the radical alteration in the definition of farm residence used by the census in 1960.[2] The official figure for 1960 by the new definition was 15.6 million, which represented a decline of about a third since 1950.[3]

Unprecedented technological progress in agriculture, nonfarm employment, and many other factors have produced a continued lowering of the size of the farm population. In 1965, it was estimated that there were 12.4 million farm residents.

In 1960-66, the net outmigration from farms averaged 804,000 persons per year, a somewhat smaller number than the yearly average of 1,013,000 from 1950 to 1960 (fig. 1). But it is smaller only because the base farm population from which the migrants are drawn is smaller, and not from any slackening in the rate of migration. The annual migration rate, which is the amount of net farm migra-

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[1] Reproduced from *Rural People in the American Economy*. U.S. Dept. Agr., Econ. Res. Serv. Agr. Econ. Rpt. 191. Oct. 1966.

[2] In 1960, farm residence was determined by using a definition based on criteria of land acreage and value of agricultural products sold. Formerly, farm residence was determined on the basis of the respondent's opinion as to whether his house was on a farm or ranch.

[3] The figure of 15.6 million is an annual average for 1960 derived from the Current Population Survey of the Bureau of the Census. The enumerated farm population in the 1960 census was 13.5 million.

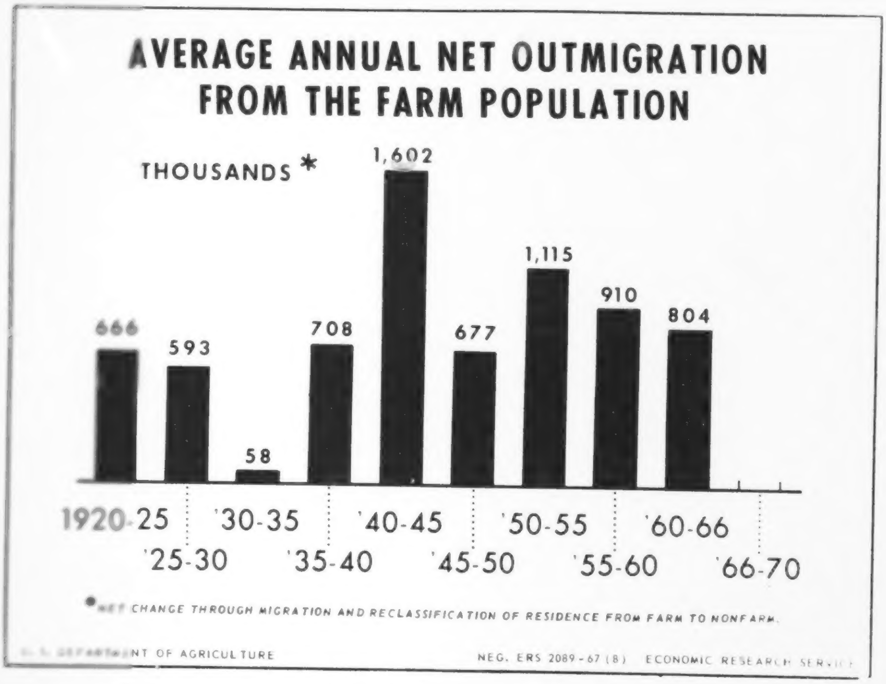

Figure 1

tion expressed as a percentage of the average annual farm population, was −5.7 percent from 1960 to 1965, compared with −5.3 percent from 1950 to 1960. The rate of outmovement from farms since 1960 is nearly as high as that which occurred during the years of World War II when unprecedented economic and military conditions encouraged migration. The gradual reduction in the *number* of persons leaving farms has somewhat eased the impact of such migration on receiving areas, but the relative impact on the sending farm communities is as high as it has ever been.

Regional Change

The growth of urban population relative to rural has occurred in all regions, but at different rates. The Northeast has been predominantly urban since 1880, and the North Central and Western Regions since 1920. The South did not become predominantly urban until 1960, following the large decrease (40 percent) in its farm population during the 1950-60 decade. This decrease in the South stemmed from: (1) The widespread decline in tenant farming in cotton and, to a lesser extent, in tobacco, as farming practices were modernized, and as labor was displaced through consolidation of land into larger operating units; (2) the rapid conversion to forestry of certain upland areas not well-suited to farming; and (3) the reclassification as nonfarm of many residential-type operations, especially in the Appalachian areas. The East South Central States (Kentucky, Tennessee, Alabama, and Mississippi) comprise the only geographic division which still had more of its people in rural than in urban areas in 1960.

Rural population change in the 1950's by State economic areas is shown in figure 2. Rural loss of more than 10 percent characterized the interior coastal plain of the Lower South from Georgia through Texas. This was also true of contiguous areas of the Great Plains, especially from Texas to Nebraska. Other zones of heavy loss were sections of the Allegheny Plateau (particularly the coal fields), much of the Ozarks and other upland country of Arkansas, Oklahoma, and Missouri, and marginal Corn Belt areas of Iowa and Missouri. For the most part, these areas are bordered by others that had rural losses of up to 10 percent.

At the other extreme are areas of sizable rural increase, many of which grew from net migration as well as from natural increase. Gains of more than 10 percent in rural population occurred in State economic areas of Florida, California, and Nevada, as might be anticipated from the boom character of those States. Gains were also widespread in the hinterlands of the large industrial centers of the Lower Great Lakes and the Atlantic Seaboard. For the most part, areas of growing rural population had large farm population losses. However, agriculture has not been the principal rural activity in such areas, and increases in numbers of nonfarm rural

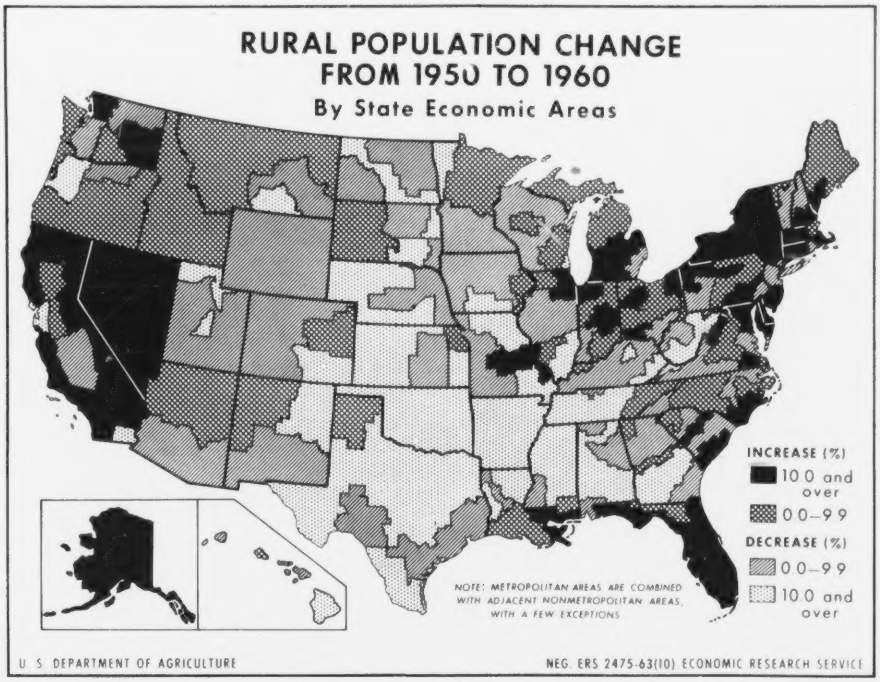
RURAL POPULATION CHANGE
FROM 1950 TO 1960
By State Economic Areas
INCREASE (%)
10.0 and over
0.0–9.9
DECREASE (%)
0.0–9.9
10.0 and over
NOTE: METROPOLITAN AREAS ARE COMBINED WITH ADJACENT NONMETROPOLITAN AREAS, WITH A FEW EXCEPTIONS
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FIGURE 2

people have more than offset farm losses. Many areas of recent rural population growth in the Northeast and the East North Central States earlier passed through a period of mild rural population losses based on agricultural changes. The revival of rural growth here is associated with factors seldom part of the traditional rural primary industries of farming, mining, and lumbering, but rather associated with manufacturing and commuting to urban employment. . . .

Age Structure

In 1960, the median age of the rural population was 27.3 years, compared with a median of 30.4 years for the urban. Rural people are younger on the average because of a higher proportion of children and a lower proportion of adults of working age.

Largely because of the persistence of higher birth levels in the 1950's, the median age of the total U.S. population fell slightly, from 30.2 years in 1950 to 29.5 years in 1960. This decline in median age is a reversal of an aging trend which was in evidence for more than a century.

Both urban and nonfarm rural people shared in the age decline from 1950 to 1960, but the median age of the farm population continued to advance. The farm population differed from the other residence groups because of the continued heavy outmigration of young adults and children from farm areas, which left this group with a higher proportion of older adults. Between 1950 and 1960, the median age of the farm population increased from 26.3 to 29.6 years.

Farm people differ greatly in age composition from both urban and nonfarm rural populations. The farm population has a heavy base of young children under 18 and a very small young adult group 18-34 years, with the bulk of the adult population being middle-aged. Farm people 60-69 years old outnumber those who are 20-29 years old, whereas persons 20-29 outnumber those 60-69 by 80 percent in the nonfarm rural population and by 65 percent in the urban population. The age structure of the farm population has resulted from heavy outmigration of young adults over the last 20 years.

The larger proportion of young children in the rural population reflects high fertility rates, which can be compared by considering the number of children ever born to women 35-44 years of age. (Women of this age are the youngest group that has nearly completed its lifetime childbearing.) In 1960, the number of children born per 1,000 women of this age was 2.269 in urban areas and 3,001 in rural areas.

About 2,130 children ever born per 1,000 women are needed for population replacement. This allows for the loss of children who are born but fail to survive to the average age of childbearing. Comparing the requirement for population replacement with completed fertility, it can be seen that urban women have borne children at a rate of about 7 percent above replacement level in recent years. Rural women, on the other hand, have had 40 percent more children than needed for replacement. Among farm women, this excess is more than 55 percent. Although women living in rural areas have more children than women in urban areas, the gap has narrowed between the two groups.

Sex Ratios

The ratio of males to females is sharply different for the rural and urban populations. In 1960, rural men outnumbered rural women by a ratio of 104 to 100, while the urban ratio was only 94. There are fewer age groups in the rural population than in the urban with a large difference between the number of males and females. One reason for the retention of men in the rural population is that many rural industries—such as farming, mining, logging and milling, and defense work—employ relatively few women compared with industries in urban areas. But even among children under 15 years old, the ratio of males to females is higher in rural than in urban areas.

The preponderance of males exists in both the farm and nonfarm parts of the rural population. However, males outnumber females to a greater extent in the farm population. In 1960, the sex ratios were 107 for farm and 103 for nonfarm rural people. Young farm women tend to leave farms sooner than do young men, and widowed women tend to leave farms unless they remarry.

Color Composition

At the turn of the century, more than three-fourths of the nonwhite population in the United States was rural. Nonwhites were still predominantly rural as late as 1940. The high proportion of nonwhites in rural areas was due primarily to the large numbers of Negroes employed in agriculture. The change from a predominantly rural to a predominantly urban population group had been observed 20 years earlier in the white population. Since 1940, the rise in percentage of urban nonwhites has been very rapid. During World War II, military service and the increased manpower needs of war industries resulted in large numbers of nonwhites leaving rural areas. Between 1940 and 1950, the proportion of the nonwhite total that was rural declined from 52 to 38 percent. Rural declines continued during the 1950's as agriculture required less manpower and urban employment opportunities increased. By 1960, only 28 percent of the 20.5 million nonwhite persons were rural residents.

Among nonwhites, Negroes predominate; nonwhite groups in the United States other than Negroes are a small fraction of the total population —less than 1 percent. With the exception of the American Indian population, nonwhites are located mostly in urban areas. The high incidence of rural residence among Indians results partly from the location of many of them on reservations, which were established in rural areas. Many reservations are still distant from the major urban centers.

Between 1950 and 1960, the total white rural population remained almost stationary while the nonwhite decreased by 9 percent. The overall decrease among rural nonwhites was associated with a 23-percent decline in farm residents which was not offset by nonfarm rural increases. On the other hand, in the white rural population, the even heavier decline of 34 percent in farm population was counterbalanced by net movement into nonfarm rural areas.

Since 1960, the nonwhite farm population has been declining much more rapidly than the white. Between 1960 and 1965, the nonwhite farm population decreased by 41 percent while that of whites decreased by 17 percent. During these 5 years, a third of the drop in farm population can be attributed to the exodus of nonwhites from farms.

Dependency

The dependency ratio is useful as a measure of the extent to which the material production and income of persons working may need to be shared with persons not of working age. To determine dependency ratios, the population under 15 years of age and 65 years of age and over, is taken as a fraction of the population 20-64 years old. In 1960, for each 1,000 productive-aged people, there were 863 in the dependent age groups for the rural population as compared with 727 for the urban population. In the rural population, there was little difference in the dependency ratio of farm and nonfarm rural people. The higher dependency ratio for the rural population, compared with the urban, primarily reflects the higher fertility rates of rural people. For every 1,000 productive-aged persons in the rural population, there were 680 children and 183 older persons. The comparable figures for the urban population were 559 children and 168 older persons.

With increasing life expectancy, changes have occurred in demand for products and services suited to dependents' needs and in financial support of older persons through extension of various types of insurance and social security. The influence of larger numbers of older people in the population will be felt further in the future throughout the nation as the elderly continue to make up an increasingly larger proportion of the dependent population.

Labor Force

Today's rural labor force (persons 14 years old or over working or actively looking for work) may number about 20 million persons, although no firm current statistics are available.[5] This estimate represents a small increase over the 1950 and 1960 levels of roughly 19 million. The continued declines in farm employment are thought to have been more than offset by increases in the numbers of rural persons engaged in nonfarm occupations.

The rural labor force was probably about a fourth of the average 78.5 million persons in the country who worked or looked for work in 1965, approximately the same proportion that the rural population comprised of the total. Workers living on farms were about 7 percent and those in nonfarm rural areas about 18 percent of the total labor force of the country.

Labor Force Participation

The extent to which the residential segments exhibit variation in labor force participation is associated with a wide variety of factors. Of primary importance is the demographic mix—the proportions of males and females in the various age groups, the racial composition, the proportions of single versus married persons, the proportions of married women with young children to care for, and other factors. The participation in the labor force of these demographic groups is, in turn, based not only on such economic factors as the numbers and types of jobs available, but also on personal and societal attitudes toward work, stemming from custom and tradition, and other social and psychological variables.

In 1960, about 51 percent of the rural population 14 years old and over was in the labor force, compared with 57 percent in the urban population. This difference is due principally to the fact that fewer rural than urban women have paid employment. Not only are fewer jobs available to rural women, but a higher proportion of the women are married and have young children. In addition, rural attitudes have not traditionally encouraged women to work outside the home or family business. Nevertheless, the employment of rural women has increased tremendously in recent decades, following the general trend. Women now constitute about 26 percent of the rural labor force, whereas they were only about 16 percent in 1940.

The lower participation rate in rural areas is due also to the fact that males, particularly nonwhites, are in the labor force to a lesser extent than urban males. Although rates for nonwhite urban males are lower than those for whites, the difference between white and nonwhite rates is much greater for the rural males.

The generally lower rate of labor force participation of nonwhite men, which is observed for nearly all age groups in all three residence categories, stems from many factors. For example, continued rebuffs when seeking jobs associated with lack of education and skills, or due to discriminatory hiring practices, may be a factor that causes relatively more nonwhite men to discontinue looking for work and to actually withdraw from the labor force. Relatively poorer health, on the average, and different attitudes toward work may also be associated with their lesser participation.

The white-nonwhite differential is particularly striking among nonfarm rural males. The labor force data utilized here relate to a week in late March, when agricultural work is at a low point. Many nonfarm rural men do hired farmwork during the busy agricultural seasons. They do not look for this type of work in March, and they may not look for other types of work for some of the reasons cited above.

In contrast to men, nonwhite women have higher participation rates than white in all three residence classes. More nonwhite women are heads of households, or for other reasons, must be employed. The participation of rural nonwhite women is, however, very much lower than that of urban nonwhite women. The relative scarcity of jobs in rural areas is an important reason for this. Another reason is that many rural nonwhite women are without basic occupational or educational skills, or they may face discriminatory hiring practices. Furthermore, relatively more urban than rural nonwhite women are either single or heads of households; thus they are often required to earn a livelihood.

Because work is available, no matter how relatively unproductive some of it may be, a higher proportion of farm males, among the young teenagers and the elderly, are in the labor force than is true of males in these ages in the nonfarm rural or urban population. Similarly, because jobs for women are not as available on farms, their participation at all age levels is lower than that of women in nonfarm areas.

Changes in Industrial and Occupational Composition

The occupation and industry mix of the rural labor force has been substantially altered as a result of the dramatic increases and decreases in various industry and occupational segments of the rural labor force, which have brought it closer in composition to that of the urban population . . . (fig. 3). To summarize briefly, rural employment in: (1) Extractive industries has declined; (2) manufacturing and various types of trades and services has increased sharply; (3) other industries has increased moderately; (4) farming and laboring occupations has declined; and (5) all other major occupations has increased.

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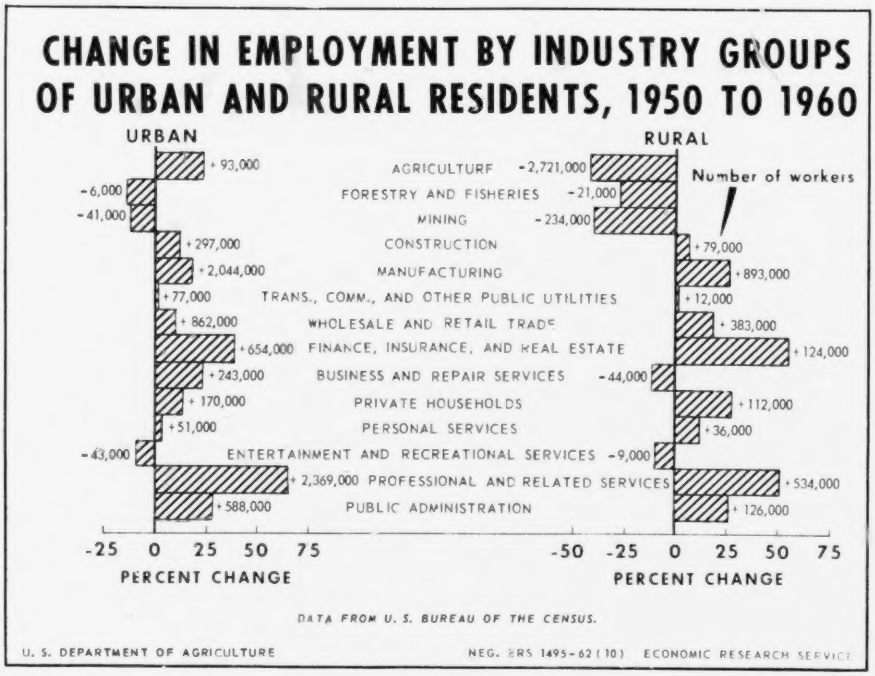
[5] Current estimates are by the Economic Research Service. Discussion in the rest of this section relies primarily on data from the decennial Censuses of Population.



DATA FROM U. S. BUREAU OF THE CENSUS.

U. S. DEPARTMENT OF AGRICULTURE NEG. ERS 1495-62 (10) ECONOMIC RESEARCH SERVICE

FIGURE 3

Industrial Composition

The industrial structure of the labor force is very different for farm residents and for rural residents who do not live on farms. The work of farm residents is still overwhelmingly agricultural (6 out of 10 farm residents worked in agriculture in 1960), although the number of persons employed in agriculture was lower in 1960 than it was more than 100 years ago. The next two most important industries employing farm residents were manufacturing and the service industries, which together provided jobs for a fourth of the farm residents.

In contrast, the industrial composition of the nonfarm rural force was fairly similar to that of urban workers. Manufacturing employed slightly more than a fourth of the labor force in each of the nonfarm groups. The service industries, including private household work, entertainment and recreation, education, hospitals, and public administration, also employed about a fourth of each nonfarm labor force. Trade supplied about a fifth of the jobs to urban and nonfarm rural people.

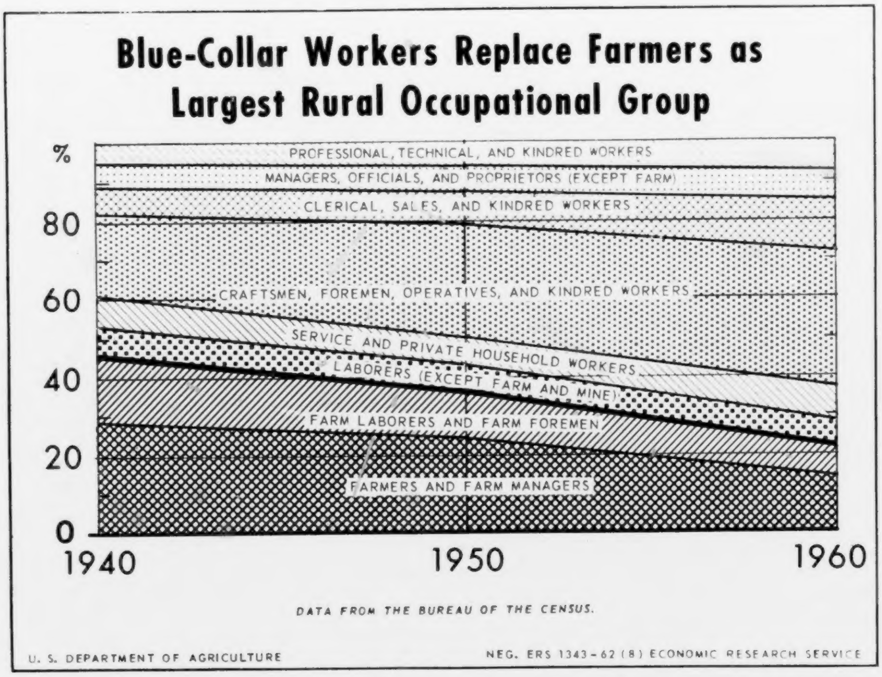
The nonwhite labor force in both farm and nonfarm rural areas is substantially different in industrial composition from that of the white labor force in these areas. In general, nonwhites are more heavily concentrated in agricultural work. Among farm residents, 7 out of 10 nonwhite persons work in agriculture, but only 6 out of 10 white persons do. Nonfarm rural nonwhite workers are heavily represented in agriculture also, unlike white persons in these areas.

Occupational Composition

As with industry, occupations of persons in the labor force in nonfarm rural areas in 1960 were more akin to the occupations of their urban neighbors than they were to the job categories of farm residents. Blue-collar work, not farmwork, predominates among nonfarm rural men; more than half of the men were working at blue-collar jobs, a fourth at white-collar jobs, and about a tenth at farmwork. (fig. 4.)

Among the farm residents, men living on farms and working on farms (70 percent) far outnumbered men in all other occupational groups combined. Most of these men were farm operators. The majority of the remaining male farm residents worked in the blue-collar occupations, primarily as skilled and semiskilled workers.

Farm women were not so highly concentrated in farmwork as men. Only a fourth of these women worked as farm operators or farm laborers. The rest worked in blue-collar and service occupations to the same degree as urban women. Factory work, for example, offered employment to 15 percent of the women living on farms and to the same proportion of women in the cities. The same is true for the service occupations which provided work for about a fifth of the women in farm and urban areas.


Blue-Collar Workers Replace Farmers as Largest Rural Occupational Group

DATA FROM THE BUREAU OF THE CENSUS.

U. S. DEPARTMENT OF AGRICULTURE

NEG. ERS 1343-62 (8) ECONOMIC RESEARCH SERVICE

FIGURE 4

Only in the clerical fields were women farm residents employed in substantially smaller proportions than women in nonfarm rural areas.

There was a pronounced difference in the occupations of white and nonwhite women, regardless of type of residence area. Service jobs, particularly domestic work, dominated the occupational structure of the nonwhite female labor force in all areas. These jobs provided employment to two-fifths of the nonwhite women in farm areas and to two-thirds of the nonwhite women in nonfarm rural areas in 1960. The other large occupational category for nonwhite women was farmwork, which occupied 40 percent of the farm women and 10 percent of the nonfarm rural women. Blue-collar and white-collar jobs for nonwhite women in the rural areas are scarce, indeed, compared with the proportion of white women who are holding these jobs.

Continued Decline in Farm Employment

Total agricultural employment has declined in almost every year since the end of World War II. It was 8.6 million in 1945 and only 4.6 million in 1965. The decline over the two decades cut agricultural employment by almost half, compared with an increase of about a half in total employment outside agriculture during the same period.

Within agriculture, only the number of family workers declined while those employed as wage and salary workers remained about the same.

Unemployment and Underemployment

Unemployment rates were higher for nonfarm rural residents than for urban residents in 1960. In the nonfarm rural labor force, 6.1 percent were unemployed as compared with 5.1 percent in the urban labor force. This disparity varied by educational level. Higher unemployment rates for nonfarm rural men and women were concentrated among those who had not been to college, while there was little difference between nonfarm rural and urban unemployment rates for persons who had completed some college work.

Unemployment rates for farm women in 1960 were much higher than for farm men, and tended to approximate rates prevailing for other women in the country. Due to the low reported unemployment of farm men, the unemployment rate of 3 percent for farm residents as a whole was markedly lower than for nonfarm rural and urban residents. However, the reported unemployment rate is not a good indicator of utilization of manpower resources of farm people because of the substantial amount of *under*employment on farms. Most farm operators report that they are employed rather than looking for work, even though in off-seasons they are doing only a few hours of work per week. Furthermore, underemployment may take the form of producing very little during those hours that are worked.

For example, a man's education and other capacities might qualify him to earn $2 an hour in nonfarm work, which in a full-time position of 2,000 hours per year would result in an income of $4,000. But if he is a farm operator, he may net only $3,000 per year. The loss is the same as if he were unemployed 3 months of the year.

The unemployment equivalent of underemployment can be estimated by comparing actual earnings of large groups of persons with earnings of large groups of their counterparts with respect to earning capacities, values, and tastes. This has been done by the Economic Research Service for persons in the rural labor force. The unemployment equivalent of underemployment of those in the labor force between the ages of 20 and 64 is estimated to have been 2.5 million man-years in 1960. This amounts to 15.6 percent of the rural labor force in these age groups in that year.

Of the 2.5 million man-years of underemployment, 1.1 million was among farm residents. This was 26.5 percent of the 1960 farm labor force between 20 and 64 years of age. The 1.4 million man-years among nonfarm rural men and women between 20 and 64 amounted to 12 percent of this labor force.

There was little variation in the severity of underemployment between farm men and women. The percentage for men was 26 and for women, 27. There were, however, decided differences between nonfarm rural men and women. Nonfarm rural women suffered underemployment almost as severe as for the farm people—20.5 percent. Nonfarm rural men experienced underemployment equivalent to 8.5 percent of the labor force.

These estimates of underemployment pertain only to those in the labor force. The probably large number, particularly of rural women, who are not in the labor force because there are no employment opportunities available within range of their homes, are not included here as underemployed.

Income

Nonfarm Rural

Nonfarm rural income is below that of urban dwellers, but is substantially higher than that of farm people. The median income of nonfarm rural families in 1959 was 84 percent of the median for all U.S. families.

This relationship between nonfarm rural family income and all U.S. family income is about the same as that prevailing between adult males in the two populations. For instance, while nonfarm rural median family income was 84 percent of the U.S. median, nonfarm rural males between 20 and 64 years of age had a median income that was 87 percent of that for all U.S. males of these ages. This indicates that low nonfarm rural family incomes do not result primarily from the lack of a male breadwinner of working age.

One important reason why incomes are low in rural America is that earning capacities are low. Another important reason is that incomes attained are below earning capacities.

Earning capacities can be estimated on the basis of education, age, occupation, proportion in the armed forces, and other factors that affect income, regardless of whether one is an urban or rural resident. Because of an unfavorable mix of these characteristics, for males in the labor force between the ages of 20 and 64, it is estimated that nonfarm rural median income would have been 95 percent as great as U.S. median income in 1959 if incomes received had been equal to estimated earning capacities. The difference between 100 and 95 percent is an estimate of the extent to which incomes are low due to low earning capacities. The difference between 95 percent of the U.S. median income for men 20 to 64 years of age and the figure of 87 percent (which nonfarm rural men actually received) estimates the extent to which incomes received are below earning capacities.[6] Incomes were furthest below capacities for the older, more poorly educated nonfarm rural males.

Farm

While incomes of farm people have increased over time, they have made little progress in improving their low standing relative to nonfarm people. For farm families, median money income was only 57 percent of the U.S. median family income in 1959.

For farm males in the labor force between the ages of 20 and 64, the actual median income in 1959 was only 56 percent of the U.S. median for males of comparable age. It is estimated that this actual median for farm males would have been 89 percent of the U.S. median if incomes realized had been equal to those attained in the United States as a whole by persons of comparable earning capacity. The difference between 100 and 89 percent is therefore an estimate of the extent to which farm male incomes are reduced due to relatively low earning capacities.

In making comparisons between money income for persons on farms and money income for all persons in the country, however, allowance should be made for differences in the nonmoney components of income, such as home-produced food, and possible deduction of some housing costs before calculating net money income. It is assumed here that a money income 85 percent as great for persons on farms as for persons in the United States as a whole who have comparable earning capacities would represent the same real income.

When this allowance is made (0.89 × 0.85 = 0.76), it results in an estimate that a median money income for farm males between 20 and 64 years of age that was 76 percent of the money median for all U.S. males of the same age group would represent for these farm men real income equivalent to that obtaining in the country as a whole for labor of comparable capacity.

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[6] The difference between earning capacities and actual earnings is the same concept used above in estimating underemployment.

The difference between 76 percent and the actual median income, which is 56 percent of the U.S. median, reflects the extent to which farm male incomes are low as a result of failure to realize incomes commensurate with those prevailing in the United States as a whole for men of comparable earning capacity. As with nonfarm rural males, this discrepancy between actual and potential earnings is greatest for older, less well-educated groups.

Farm males include many family workers and many men engaged primarily in nonfarm work. Taking only farm operators, it is estimated that a median money income 79 percent of that for all U.S. labor force males 20 years of age and over would be expected on the basis of comparable income-earning capacity. As a group, however, these farm operators attained a median money income only 59 percent of that for all U.S. males 20 years of age and over.

Farms with sales of more than $20,000 achieve parity of income in the sense here used. It is estimated that smaller commercial farms would require increases of about 30 percent for those with sales between $10,000 and $20,000, to more than 200 percent for farms selling less than $2,500 worth of farm products, if the operators were to have incomes equal to earning capacities. Part-time and part-retirement farms would need much smaller increases.

* * * * * * *

Projections to 1970

The future size of the rural population and labor force will be largely determined by migration trends, and these in turn will be heavily influenced by economic development. But economic factors are not the only ones that motivate people to remain in, leave, or move to rural areas. Some rural young people prefer to live in rural areas, while others wish to live in urban centers. Their preference may be related to style of life or may stem from the type of occupation they wish to pursue. Often the opinion is expressed that the rural environment is a good one in which to raise children. Certain rural areas also attract people as places of retirement. Nevertheless, economic influences are probably the dominant factors in determining rural migration.

Projection A

Two projections of rural population to 1970 have been made to illustrate the effect of different patterns of migration (table 2). In Projection A, it is assumed that from 1960 to 1970 no migration will occur from the rural population. Growth would then be determined by the balance of projected births and deaths. The rural population would grow by about 9.7 million (from 54.1 in 1960 to 63.8 million in 1970). By far the most rapid growth would occur in the group aged 20 to 29, which would experience a 4 million increase. Young people entering this age during the 1960's were born during a period of high birth rates. They are more numerous than the birth groups that precede them. More importantly, this is the age group at which the heaviest movement to urban areas normally occurs. Therefore, if the net movement of rural youth to urban areas should cease, the number of young rural adults would increase very rapidly.

Under Projection A, the population under 20 years old would grow by about 20 percent. Among those 10 to 19, the increase would come largely from halting the outmovement of older teenagers. The number of children under 10 is affected by the number of young adults of childbearing age in the population. With the rapid growth in numbers of persons 20 to 29, the number of children born would rise by 19 percent even without any increase in fertility rates per family. At ages 30 to 44, declines in population would occur as persons born during the low birth-rate years of the depression reached these ages. At age 45 and above, substantial gains would result.

Projection B

Suppose, on the other hand, that migration rates from the rural population continued during the 1960's at levels similar to those that are estimated to have prevailed in the 1950's (Projection B). In this event, the 1970 rural population would be 53.8 million, or some 200,000 smaller than in 1960, and nearly 10 million smaller than the number that would be present without migration. Of this difference, about 6.8 million would stem from the migration of people alive in 1960 and 3.1 million would result primarily from the smaller number of births that would occur in the rural population during the decade. All age groups would experience some net outmovement. The migration rates would be less than 10 percent for all ages above 30. However, for persons 10 to 19 years old in 1960, and becoming 20 to 29 by 1970, the outmovement would amount to 34 percent.

Labor Force

The effects of these two hypothetical projections on the rural civilian labor force are also illustrated in table 2. The figures are based on a continuation of the rural labor force participation rates observed in 1960, taking sex, age, and farm-nonfarm residence into account.

The absence of net movement to urban places (Projection A) would imply an increase in the rural labor force of 3.5 million, a growth of 19 percent. If these people were to be employed, an equal growth in jobs located in rural areas or accessible to rural residents by commuting would be required. Four-fifths of the additional jobs would have to be

TABLE 2.—*Illustrative projections of rural population and labor force, for the United States, 1970* [1]

Age	1960 Census	Projection A—with no net migration		Projection B—with net outmigration to urban areas			
		Projected 1970 population with no migration during 1960–70 decade [2]	Population change, 1960–70 with no migration during decade	Projected 1970 population with outmigration during 1960–70 decade [3]	Population change, 1960–70 with outmigration during decade	Implicit rural-urban net migration, 1960–70	Migration rate [4]
	Thou.	*Thou.*	*Thou.*	*Thou.*	*Thou.*	*Thou.*	*Pct.*
			TOTAL RURAL POPULATION				
Total, all ages	54,054	63,792	+9,738	53,845	−209	−9,946	−15.6
0–9 years	12,344	14,709	+2,365	11,571	−773	−3,138	−21.3
10–19	10,214	12,252	+2,038	10,926	+712	−1,326	−10.8
20–29	6,100	10,151	+4,051	6,679	+579	−3,472	−34.2
30–44	10,019	9,250	−769	8,391	−1,628	−859	−9.3
45–64	10,345	11,786	+1,441	11,060	+715	−728	−6.2
65 and over	5,033	5,644	+611	5,220	+187	−424	−7.5
			RURAL CIVILIAN LABOR FORCE				
Total, 14 years and over	18,212	21,667	+3,455	18,227	+15	−3,440	−15.9
14–19 years	1,418	2,013	+595	1,726	+308	−287	−14.3
20–29	3,345	5,930	+2,585	3,852	+507	−2,078	−35.0
30–44	6,233	5,802	−431	5,266	−967	−536	−9.2
45–64	6,283	6,915	+632	6,492	+209	−424	−6.1
65 and over	933	1,006	+73	892	−41	−114	−11.3

Source: 1960 Census of Population and unpublished data from Economic Research Service, U.S. Dept. of Agr.

[1] Figures are rounded to the nearest thousand without being adjusted to group totals.

[2] Projections to 1970 under the assumption of no migration during 1960–70 were developed for the population 10 years old and over in 1970, by applying 10-year survival ratios to the 1960 population. For the population under 10 years in 1970, a method based on age-specific ratios of children under 5 years per 1,000 women 15–49 years was utilized. Projections were made for farm and nonfarm rural populations separately, with rural totals obtained by summation.

[3] Projections to 1970, under the assumption of rural-urban migration during 1960–70 decade, were developed by assuming that estimated rates of net migration observed during the 1950–60 decade would continue through the 1960–70 decade. Migration rates were applied to farm and nonfarm rural populations separately, with rural totals obtained by summation.

[4] Estimates of 1960–70 net migration expressed as a percentage of the population that would survive to 1970.

available for workers under 30 years of age in 1970, even if this group also absorbed all the jobs made available by the 430,000 decline in workers 30 to 44 years old. The total number of additional nonagricultural jobs needed would be larger than 3.5 million due to the continued decline in number of farms.

If the rural population experiences net outmovement similar to that of the 1950's (Projection B), the rural labor force would remain almost unchanged in total size by 1970. But this would still imply the need for a growth in nonfarm jobs sufficient to offset the drop that is now occurring in farm jobs.

Economic Development

The actual course of rural population and labor force change will almost surely fall somewhere between the projections discussed. The rate of economic development in, or accessible to, rural areas that would be necessary to absorb all of the oncoming rural labor force seems far beyond the realm of achievement at the moment. On the other hand, there are a number of programs which provide greater opportunities in rural areas than were present during the 1950's. These can alter the type of movements observed in recent decades, even if at presently authorized program levels it is unlikely the rural-to-urban direction of the movement would be reversed.

The programs referred to include the investment loans, technical and other assistance from the Public Works and Economic Development Act of 1965, the various manpower training programs, the expanded loan authorities of the Farmers Home Administration for water facilities, nonfarm business capital, and recreation enterprises; improved educational facilities encouraged by the Elementary and Secondary Education Act and by enlarged authorizations for vocational education; the increased rural community planning resulting from the Rural Areas Development Program; the activities sponsored by the Economic Opportunity Act; and the efforts to extend such programs into rural areas by the Rural Community Development Service of the Department of Agriculture.

Chapter 2

The Negro Population of the South

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Introduction

This report examines the changes and the trends in characteristics of the Negro population of the Southern United States. Whenever possible, the data have been examined by cohorts in order to obtain clearer pictures of trends. The report is made up of six parts and a summary; the parts deal with (1) population distribution, (2) migration, (3) occupational changes, (4) education, (5) income, and (6) fertility, marital status, and dependency ratios.

Population Distribution

Let us begin this examination of the southern Negro population by a quick look at the distribution of the Negro population of the United States. In 1870 over 90 percent of the U.S. Negro population lived in the South and over 80 percent in the rural South. By 1960 less than 25 percent lived in the rural South and less than 60 percent in the total South. Most of this change has taken place since the 1930's. In all areas outside the South since at least 1870 the Negro population has been more concentrated in urban areas than has the white population. Even with the declining proportion of Negroes in the rural areas of the South, in 1960 a larger proportion of Negroes than whites were still rural although for the first time the census found over half of both groups living in urban areas.

Table 1 shows the distribution of the Negro population of the United States by the urban and rural portions of 15 Southern States for 1940, 1950, and 1960. Some of the reduction in rural farm population shown in this table between 1950 and 1960 is due to the changing definitions of rural farm and rural nonfarm. However, most of the change represents real shifts in residence. Texas, North Carolina, Florida, and Louisiana were the only four Southern States containing over 5 percent of the U.S. Negro population in 1960. The proportion of the Negro population in each Southern State declined for each State except Missouri between 1950 and 1960. Missouri showed an increase from 1.8 to 1.9 percent of the total U.S. Negro population. In general, these Southern States showed an increase in the proportion of the total Negro population present in their urban areas and in their rural nonfarm areas, with the large decreases occurring in the rural farm areas.

Table 1.—*Distribution of Negro population of the United States, by rural and urban parts of 15 Southern States, 1940, 1950, and 1960*

State and residence	1940	1950	1960
	Percent	*Percent*	*Percent*
United States	100.0	100.0	100.0
Urban	48.0	61.6	72.4
Rural nonfarm	16.7	17.2	19.8
Rural farm	35.3	21.2	7.8
15 Southern States	76.4	63.1	55.3
Urban	27.8	29.9	31.9
Rural nonfarm	14.1	13.5	16.0
Rural farm	34.5	19.6	7.5
Alabama	7.6	6.1	4.8
Urban	2.4	2.8	2.7
Rural nonfarm	1.5	1.2	1.5
Rural farm	3.7	2.0	.6
Arkansas	3.8	2.6	1.9
Urban	.8	.9	.8
Rural nonfarm	.6	.5	.7
Rural farm	2.3	1.2	.4
Florida	4.0	6.6	5.5
Urban	2.2	3.0	3.2
Rural nonfarm	1.2	1.5	1.7
Rural farm	.6	2.0	.7
Georgia	8.4	3.7	4.3
Urban	2.9	2.5	3.3
Rural nonfarm	1.5	.9	.9
Rural farm	4.0	.3	.1
Kentucky	1.7	1.3	1.1
Urban	.9	.9	.8
Rural nonfarm	.4	.3	.2
Rural farm	.3	.2	.1
Louisiana	6.6	5.5	5.1
Urban	2.4	2.8	3.1
Rural nonfarm	1.2	1.3	1.5
Rural farm	3.0	1.5	.4
Maryland	2.4	2.4	2.6
Urban	1.5	1.7	1.9
Rural nonfarm	.6	.5	.6
Rural farm	.3	.2	.1
Mississippi	8.4	6.1	4.5
Urban	1.4	1.4	1.4
Rural nonfarm	1.0	1.0	1.6
Rural farm	6.0	3.7	1.5
Missouri	1.9	1.8	1.9
Urban	1.5	1.6	1.8
Rural nonfarm	.2	.1	.1
Rural farm	.2	.1	.1
North Carolina	7.6	6.7	5.6
Urban	2.3	2.2	2.2
Rural nonfarm	1.6	1.7	2.1
Rural farm	3.7	2.7	1.3

TABLE 1.—*Distribution of Negro population of the United States, by rural and urban parts of 15 Southern States, 1940, 1950, and 1960*—Continued

State and residence	1940	1950	1960
	Percent	*Percent*	*Percent*
Oklahoma	1.3	1.2	1.1
Urban	.6	.6	.7
Rural nonfarm	.2	.3	.3
Rural farm	.5	.3	.1
South Carolina	6.3	5.1	4.1
Urban	1.3	1.5	1.4
Rural nonfarm	1.2	1.3	1.8
Rural farm	3.8	2.3	.9
Tennessee	4.0	3.3	2.9
Urban	2.2	2.1	2.1
Rural nonfarm	.5	.4	.4
Rural farm	1.3	.8	.4
Texas	7.2	6.1	5.9
Urban	3.3	3.8	4.4
Rural nonfarm	1.2	1.1	1.2
Rural farm	2.7	1.2	.3
Virginia	5.1	4.6	4.0
Urban	1.9	2.1	2.1
Rural nonfarm	1.2	1.4	1.4
Rural farm	2.0	1.1	.5

Source: Sixteenth Census of the United States: 1940. Population, Vol. II. Characteristics of the Population. Pt. 1. U.S. Summary, Table 5; U.S. Census of Population: 1950. Vol. II. Characteristics of the Population, Table 15; U.S. Census of Population: 1960. Vol. 1. Characteristics of the Population, Table 37.

In table 2 we can see the shift in residence of the Negro population relative to the white population in each of these Southern States. These figures were computed by taking the percentage of the Negro population of the State living in a particular residence category, say urban, and dividing this by the percentage of the white population in the State living in the same residence class. This figure will be 1.00 if the same proportion of whites and Negroes live in an area, will be greater than 1.00 if the proportion of Negroes living in the area is greater, and will be less than 1.00 if the proportion of whites in the State living in the specified residence category is greater. From this table we see that in 1960 only in Louisiana, Mississippi, South Carolina, and Virginia was the Negro population less urban than the white population. In all other States the Negro population was more concentrated in urban areas than was the white population. In Louisiana and Virginia the proportion of urban whites and Negroes was very similar, so that only

TABLE 2.—*Relative urban-rural distribution of Negroes and whites in 15 Southern States, 1940, 1950, and 1960* [1]

State and residence	1940	1950	1960
Alabama:			
Urban	1.10	1.08	1.05
Rural nonfarm	.79	.80	.91
Rural farm	1.05	1.05	1.04
Arkansas:			
Urban	.97	1.05	1.05
Rural nonfarm	.75	.74	.94
Rural farm	1.11	1.13	1.01
Florida:			
Urban	1.02	1.03	1.06
Rural nonfarm	.99	.79	.85
Rural farm	.96	1.17	1.23
Georgia:			
Urban	1.03	1.00	1.04
Rural nonfarm	.75	.95	.89
Rural farm	1.12	1.15	.86
Kentucky:			
Urban	1.96	1.80	1.66
Rural nonfarm	1.00	.81	.57
Rural farm	.42	.36	.38
Louisiana:			
Urban	.84	.89	.96
Rural nonfarm	.73	.93	1.00
Rural farm	1.44	1.43	1.36
Maryland:			
Urban	1.05	1.03	1.05
Rural nonfarm	.84	.91	.89
Rural farm	1.10	1.00	.78
Mississippi:			
Urban	.72	.75	.77
Rural nonfarm	.55	.62	.91
Rural farm	1.28	1.42	1.68
Missouri:			
Urban	1.56	1.47	1.41
Rural nonfarm	.50	.32	.27
Rural farm	.39	.29	.25
North Carolina:			
Urban	1.16	1.00	1.00
Rural nonfarm	.72	.73	.82
Rural farm	1.09	1.30	1.51
Oklahoma:			
Urban	1.25	.97	1.06
Rural nonfarm	.78	1.01	1.19
Rural farm	.89	1.06	.59
South Carolina:			
Urban	.77	.68	.75
Rural nonfarm	.55	.81	.99
Rural farm	1.55	1.76	2.12
Tennessee:			
Urban	1.80	1.59	1.48
Rural nonfarm	.55	.46	.43
Rural farm	.69	.72	.78
Texas:			
Urban	1.00	1.00	1.00
Rural nonfarm	.74	.88	1.14
Rural farm	1.17	1.16	.66
Virginia:			
Urban	1.04	.96	.94
Rural nonfarm	.82	.96	1.05
Rural farm	1.10	1.14	1.16

Source: Sixteenth Census of the United States: 1940. Population, Vol. II. Characteristics of the Population. Pt. 1. U.S. Summary, Table 5; U.S. Census of Population: 1950. Vol. II. Characteristics of the Population, Table 15; U.S. Census of Population: 1960. Vol. I. Characteristics of the Population, Table 37.

[1] Figures shown are percentage of Negro population of a State living in specified area divided by percentage of white population of the State living in the same area. A figure of 1.00 indicates the same proportion of Negroes and whites living in an area. Greater than 1.00 indicates a greater proportion of Negroes; less than 1.00 indicates a greater proportion of whites.

in Mississippi and South Carolina do we find States where Negroes are still disproportionately rural. (It must be remembered that the white population is more rural in the South than in other regions.)

Mississippi, North Carolina, and South Carolina were the main Southern States in which there was an increasing disproportion of the Negro population in rural farm areas. Apparently these are the main Southern States in which the rural farm white population is moving out more rapidly than the rural farm Negro population.

The largest numbers of rural farm Negroes are in Mississippi and North Carolina, and it is in these States that the problem of rural Negro poverty is greatest simply because of the numbers involved. The rural farm Negro population in these two States in 1960 was approximately 570,000, whereas in 1950 there had been over 1 million rural farm Negroes in these two States. The outmigration of Negroes from rural farm areas is reducing the problem of rural Negro poverty, but it is certain that these individuals carry much of their poverty with them regardless of their place of residence.

Migration

In the preceding section we discussed the distribution of the Negro population. In the present section we take a look at the patterns of migration that have been influential in changing the distribution of the Negro population.

Estimates of net migration were computed by the census survival rate method for regions of the United States for the period 1910–60. These estimates differ from other estimates of net migration by virtue of the fact that the rural and urban portions of the regions have been treated separately. It was necessary to combine rural farm and rural nonfarm areas in order that the changing definitions would not have too great an effect on the estimates. The older urban definition (ignoring minor changes) was used for the 1910–50 period, and the new urban definition was used for the 1950–60 decade.

For the period 1910–40 the data are for white and Negro with white and nonwhite used after that. In the South, nonwhite and Negro are virtually synonymous so that these two terms are used interchangeably.

The results have the usual shortcomings of the forward survival rate method of estimating net migration, plus the additional factor that application of the same set of survival rates to urban and rural populations introduces other errors. When the boundaries of a city expanded or when an area changed in classification from rural to urban, this method classes the residents as migrants. There was a change, of course, from rural to urban residence, and for many of these people there was also a gradual change in their way of living.

The estimates of net migration without any information on age of migrants are shown in table 3. The figures shown here are total numbers of migrants. The Census South has been broken into two parts, the secessionist South and the nonsecessionist South. Our concern here is primarily with the secessionist South. In no decade since 1910 has the number of Negro outmigrants from rural areas been as large as the number of white outmigrants from rural areas of the secessionist South. However, the total number of outmigrants from the rural areas of the South shows the justification for the term "seedbed of the nation."

TABLE 3.—*Estimates of net migration for urban and rural portions of regions by race for 1910 to 1940 and by color for 1940 to 1960*

[Data in thousands]

Decade, race or color, and residence	Secessionist South	Nonsecessionist South	Northeast	North Central	West
1910–20:					
White:					
Urban	860	426	29	1,600	694
Rural	−1,139	−478	−200	−1,773	73
Negro:					
Urban	528	60	167	247	18
Rural	−958	−55	3	−17	8
1920–30:					
White:					
Urban	1,279	268	128	1,352	1,299
Rural	−1,592	−560	−348	−1,794	−31
Negro:					
Urban	188	81	342	366	38
Rural	−1,013	−42	24	16	1
1930–40:					
White:					
Urban	747	158	−277	85	794
Rural	−824	−375	115	−755	333
Negro:					
Urban	412	87	167	125	42
Rural	−793	−53	4	2	7

TABLE 3.—*Estimates of net migration for urban and rural portions of regions by race for 1910 to 1940 and by color for 1940 to 1960*—Continued

[Data in thousands]

Decade, race or color, and residence	Secessionist South	Nonsecessionist South	Northeast	North Central	West
1940–50:					
White:					
Urban	2,111	158	−1,052	171	1,874
Rural	−1,988	−837	229	−1,498	831
Nonwhite:					
Urban	307	99	412	547	263
Rural	−1,577	−99	16	−2	33
1950–60:					
White:					
Urban	2,874	168	−533	875	3,221
Rural	−2,332	−978	−481	−1,960	−854
Nonwhite:					
Urban	289	91	449	479	249
Rural	−1,476	−75	−7	−6	7

It is possible to see from this table that the depression decade of the thirties was the period when southern urban areas were most attractive to Negro migrants. Since that time the number of Negro migrants to southern urban areas has been declining, although still totaling nearly 300,000 in the 1950–60 decade. This declining attractiveness of southern urban areas as destinations for Negro migrants from the rural South has added to the increased number moving to urban areas outside the South. For the most part, these rural migrants carry their poverty with them.

In order to summarize the information on net migrants by age, color, and sex for the 1910–60 period, the cumulative effects of migration on cohorts of the population were computed for successive decades. These cohorts are identified by the census year in which they were 0 to 4 years of age. The number of net migrants of a particular age-sex-color group was related to the number of residents in that category at the beginning of the decade to obtain a rate of change in population due to migration. These rates of change were applied to an initial 1,000 members of a cohort in order to see the cumulative effects of migration on the cohort. The results of these computations are shown in figure 1 for nonwhite males in the rural secessionist South.

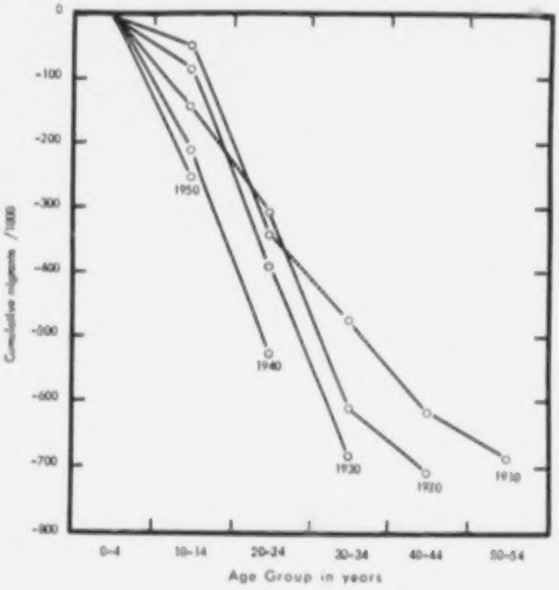

FIGURE 1.—Estimates of cumulative migration to 1960 per 1,000 original members of cohorts of nonwhite males in rural secessionist South, by age (cohorts identified by year in which members were 0 to 4 years of age).

Figure 1 shows that the rural nonwhite male cohorts of 1910, 1920, and 1930 had lost approximately 700 out of every 1,000 members by 1960, at which time they were in the 50 to 54, 40 to 44, and 30 to 34 age groups, respectively. The rates of outmigration had increased so that each succeeding cohort had lost approximately 700 out of every 1,000 members at an age 10 years younger than the preceding cohort. The cohort of 1940 had lost over 500 out of every 1,000 members by age 20 to 24. The cumulative outmigration indicates that the rates of outmigration have increased for each succeeding cohort. The pattern is sufficiently stable so that it seems safe to predict increasing rates of outmigration of Negro males from rural areas of the South.

Figure 2 shows the estimates of cumulative outmigration for cohorts of rural Negro females in the secessionist South. The pattern is almost identical to that of Negro males except that the rates of outmigration have been slightly higher. Females in general move out of rural areas at higher rates than do males.

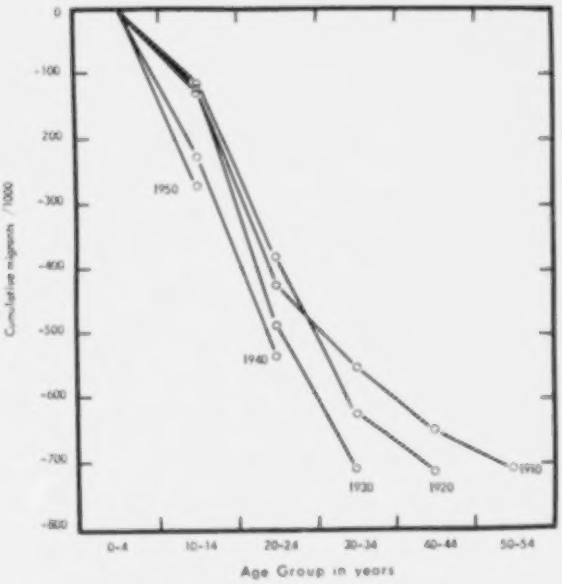

FIGURE 2.—Estimates of cumulative migration to 1960 per 1,000 original members of cohorts of nonwhite females in rural secessionist South, by age (cohorts identified by year in which members were 0 to 4 years of age).

Figure 3 shows estimates of cumulative migration for cohorts of Negro males in urban areas of the secessionist South. Every 1,000 initial members of the cohort of 1910 had been joined by an additional 1,300 individuals by age 50 to 54 in 1960. Since each succeeding cohort shows smaller cumulative gains from migration it is unlikely that any other cohort will show this sort of gain. The fact that each succeeding cohort shows smaller gains from migration is further indication of the declining attractiveness to Negroes of southern urban areas. This is further substantiated in figure 4, which shows the cumulative gains from migration made by nonwhite females in urban areas of the secessionist South. The 1910 female cohort showed much greater gains in urban areas than did the 1910 male cohort, but the male and female cohorts of 1940 and 1950 show similar patterns. The differences in the 1910 cohorts possibly reflect the employment opportunities for females in urban areas as private household workers along with a still high demand for male farm labor.

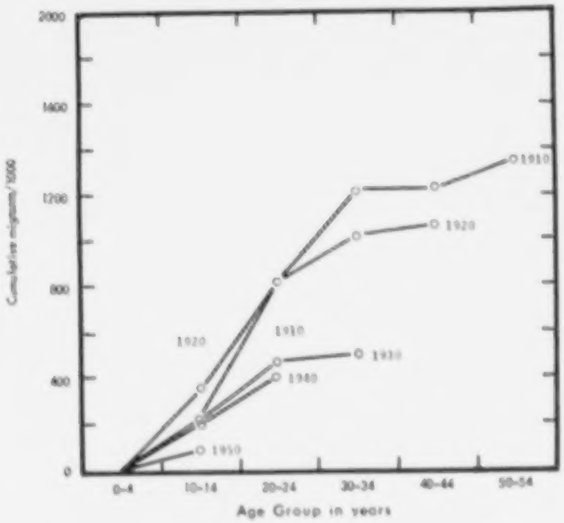

FIGURE 3.—Estimates of cumulative migration to 1960 per 1,000 original members of cohorts of nonwhite males in urban secessionist South, by age (cohorts identified by year in which members were 0 to 4 years of age).

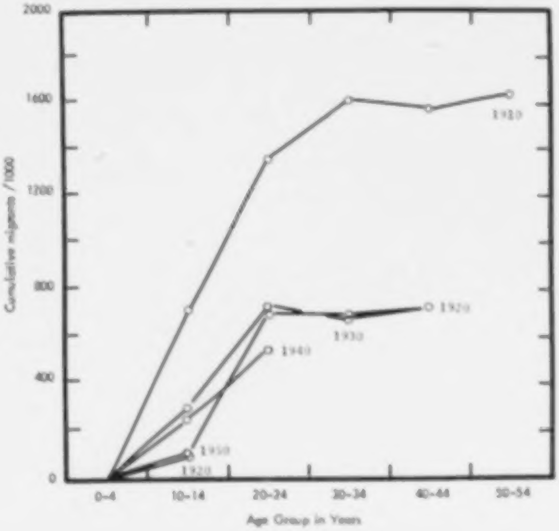

FIGURE 4.—Estimates of cumulative migration to 1960 per 1,000 original members of cohorts of nonwhite females in urban secessionist South, by age (cohorts identified by year in which members were 0 to 4 years of age).

If we look at the cumulative effects of migration on cohorts of white males and females (figures not shown) two differences are apparent. The outmigration rates of whites from rural areas have been lower than the outmigration rates of Negroes from rural areas, no cohort of whites having lost as much as 500 out of 1,000 members. The migration gains of whites in urban areas have been at higher rates than the gains of Negroes, and there is no evidence of a decline in attractiveness of southern urban areas for white migrants. This would indicate that Negroes are leaving rural areas of the South at higher rates than whites and are more likely than whites to move to areas outside the South in preference to southern urban areas.

Tabulations of the State of birth data from the 1960 census provide further information on the outmigration of Negroes from the South. Table 4 shows the percentage of individuals born in the South and divisions of the South but living elsewhere in 1960. The percentage of nonwhites born in the area and living outside the area in 1960 is higher than the corresponding percentage of whites. This is also true for the 20- to 25-year-old age group and for all older age groups. The reverse is true (a higher percentage of whites living outside the area of birth) for those under 5, 5 to 9, and for most of those 10 to 14. It is seen, therefore, that a higher proportion of Negroes than whites moves out of the South, but movement does not start at as early an age for Negroes as for whites. Since individuals under 14 years of age are unlikely to be moving as individuals, we are left with the conclusion that whites are more likely to move as family groups than are Negroes.

TABLE 4.—*Percentage of native population born in specified area and living in other areas in 1960, by age and color, for the South and the southern divisions*

Age (years)	South		South Atlantic		East South Central		West South Central	
	White	Non-white	White	Non-white	White	Non-white	White	Non-white
All ages	15.5	22.9	14.9	21.0	29.7	34.9	21.9	23.6
Under 5	6.7	3.7	8.8	3.3	11.2	6.7	9.2	4.8
5 to 9	9.9	8.1	12.2	6.3	17.2	14.9	13.3	9.5
10 to 14	10.4	10.6	11.5	7.9	19.0	18.9	14.2	12.0
15 to 19	13.1	15.7	13.7	12.5	22.7	25.6	19.3	19.3
20 to 24	18.9	27.8	18.0	24.8	35.4	42.9	27.0	31.0
25 to 29	20.8	33.2	18.6	29.2	38.3	50.5	29.2	34.9
30 to 34	20.8	35.0	18.6	31.0	37.9	51.6	29.6	37.0
35 to 39	21.3	36.9	19.1	33.6	38.1	52.4	30.9	39.5
40 to 44	20.0	36.2	17.3	33.4	36.4	50.6	29.7	38.3
45 to 49	19.0	34.1	16.0	32.3	34.7	47.9	28.2	34.9
50 to 54	18.6	32.9	15.9	32.5	34.7	45.7	27.0	32.3
55 to 59	18.0	32.8	16.0	33.4	35.3	45.4	25.1	30.8
60 to 64	17.0	31.5	16.1	33.1	35.3	43.9	23.1	28.2
65 to 69	15.5	27.3	15.9	29.9	34.6	39.5	20.7	23.6
70 to 74	14.6	25.5	16.3	28.7	34.5	38.5	19.0	20.7
75 and over	14.3	23.2	18.2	28.2	36.6	35.7	17.0	17.7

Source: U.S. Bureau of the Census. U.S. Census of Population: 1960. Subject Reports. State of Birth. Final Report PC (2)—2A, Tables 16, 17.

In conclusion it is possible to make the following statements:

(1) Negroes are moving out of the rural South at higher rates than are whites.

(2) The rates at which Negroes are moving out of the rural South are continuing to increase.

(3) The number of Negroes moving out of the South may be declining even with higher rates of outmigration because of the decline in the Negro population of the South.

(4) Southern urban areas are declining in attractiveness to Negroes as migration destinations.

(5) Negroes are less likely to move as family groups than are whites.

Occupational Changes

Four different approaches have been taken in the examination of occupational changes among nonwhites in this study. In the first of these, cohorts of the nonwhite population have been examined for changes in occupational classification between 1920 and 1960. In the second approach, regional changes in employment of nonwhites relative to whites have been examined. In the third approach, detailed occupations have been examined at the national level in order to see changes in detailed occupations along with characteristics of the occupations. In the fourth approach, the changing occupational distribution of the rural nonwhite population has been examined.

Cohort Characteristics

In general, the nonwhite male population has a smaller proportion in the labor force than does the white male population except at the youngest ages, that is ages 14 to 24. In this age group, nonwhite males have a larger proportion in the labor force. However, even in this age group in 1960 there was a smaller proportion of nonwhite males in the labor force than white males.

Examination of the occupational distribution of cohorts of nonwhite males shows a large proportion of nonwhite males at young ages employed in farming. This proportion decreases rapidly with increasing age. The increase in proportion employed in craftsmen and operative occupations indicates that there is a large shift from farming to craftsmen and operative occupations as nonwhite males increase in age. There is also a large increase in nonfarm laborers. How much of this increase is associated with migration is not known but almost certainly most of it is associated with change in place of residence.

The proportion of nonwhite females in the labor force is greater than the proportion of white females in the labor force although the differences have been decreasing. Since 1940, the nonwhite female cohorts have started their labor force experience at ages 14 to 24 with smaller proportions in the labor force than have the white female cohorts. However, the recent cohorts of nonwhites have tended to increase sharply the proportion in the labor force by ages 25 to 34 while the white female cohorts have decreased the proportion in the labor force during this first 10 years of labor force experience. This is largely a consequence of the white females tending to drop out of the labor force during the childbearing period. Nonwhite females in general do not show this tendency to drop out of the labor force during the childbearing years.

Like nonwhite males, nonwhite females show large shifts out of agricultural employment during their first 10 years in the labor force, mainly to private household work. Private household employment is still the major employment category of the nonwhite females, although recent cohorts of nonwhites are increasing their proportion in the clerical and sales category.

By examining the patterns of cohorts in specific occupational categories it is possible to make projections of the occupational distribution of the U.S. population for 1970 by age, sex, and color. These projections are summarized in table 5. It should be emphasized that these are not predictions but projections based on past trends. The extent to which there are deviations from these projections in 1970 will be of importance. If the progress in occupational status of Negroes is not as great as that projected, then careful examination should be made of the factors involved—especially in the areas where progress has been considerably less. If progress is greater than projected this would be tangible evidence that the civil rights acts and other moves to improve the economic status of Negroes are having important effects. If the figures are similar to those projected, it should not be assumed that the civil rights acts and other programs are proving ineffective. It is possible that these programs were necessary to maintain some of the more favorable employment trends already established.

The Southern Region

As we turn from the national picture to the regional picture, it is important to take a quick look at the effect of occupational distribution on

TABLE 5.—*Projected occupational distribution of age groups in 1970, by color and sex*

[Data in percent]

Sex and occupational category	White 25–34 years	White 35–44 years	White 45–54 years	White 55–64 years	Nonwhite 25–34 years	Nonwhite 35–44 years	Nonwhite 45–54 years	Nonwhite 55–64 years
MALES:								
All occupations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional and managerial	23.0	25.0	25.0	20.0	7.0	8.5	7.5	5.0
Clerical and sales	15.0	13.0	12.5	12.0	8.0	8.0	6.0	5.0
Craftsmen and operatives	37.0	42.5	41.0	38.5	33.5	35.0	32.0	28.5
Private household workers	.....	.....	.....	0.1	0.3	0.4	0.5	0.7
Other service workers	3.7	3.5	4.5	5.3	9.7	10.6	10.5	13.3
Laborers, except farm	4.0	3.5	4.0	5.0	13.0	15.0	15.5	16.5
Farmers and farm managers	1.5	2.5	3.0	3.5	0.8	1.5	2.0	2.5
Farm laborers	1.5	0.8	0.8	0.8	4.0	5.0	5.0	5.0
Not in the experienced labor force (including occupation not reported) [1]	14.3	9.2	9.2	14.7	23.7	16.0	21.0	23.5
FEMALES:								
All occupations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional and managerial	6.0	8.0	9.0	11.0	5.0	6.5	6.0	6.0
Clerical and sales	16.0	19.0	19.0	19.0	10.0	10.0	8.0	4.5
Craftsmen and operatives	6.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0
Private household workers	2.0	1.0	1.5	2.0	12.0	14.0	16.0	20.0
Other service workers	4.5	5.0	6.0	7.0	11.0	13.0	13.0	12.5
Laborers, except farm	.....	0.1	0.1	0.2	0.3	0.4	0.5	0.6
Farmers and farm managers	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Farm laborers	.....	.....	.....	.....	0.1	0.1	0.1	0.1
Not in the experienced labor force (including occupation not reported) [1]	65.3	59.7	56.2	52.6	54.4	47.8	48.2	49.1

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[1] The proportion not in the experienced civilian labor force is not a projection but is included to clarify the 100-percent base.

median incomes of whites and Negroes. In the South in 1950 the median income of nonwhite males was only 50 percent of the median income of white males. In 1960 the median income of nonwhite males was only 47 percent of the median income of white males. Thus for the region as a whole there had been an actual loss of relative income of nonwhite males between 1950 and 1960.

The differential incomes in 1950 and 1960 have been recomputed on the assumption that there were no differences in white and nonwhite incomes in major occupational categories. It was assumed that both whites and nonwhites had the same income in each occupational category as did the total population in that occupational category in 1960. Median incomes for whites and nonwhites were then computed for 1950 and 1960 on the basis of the percentage of the population employed in the various occupational groups. Given this assumption, the 1950 median income of nonwhites was 73 percent of the median income of whites. Given this same assumption, the median income of nonwhite males in 1960 would have been 74 percent of the median income of white males. This procedure effectively removes the differences in income by occupation between whites and nonwhites and makes it possible to examine in detail the effect of occupational composition on median income. We are able to conclude that the differences in occupational distribution of Negroes and whites in the South account for at least 50 percent of the differences in income between whites and Negroes. Doubtless the proportion accounted for by differential occupational composition is larger than this, since we have worked only with broad occupational categories. Differences in white and nonwhite income within occupations accounts for less than 50 percent of the total differences in income.

A slightly different situation exists among Negro females in the South. In 1950 the median income of Negro females in the South was 46 percent of the median income of white females, and in 1960 the corresponding figure was 56 percent, showing considerable relative gain. If we assume equal incomes of white and nonwhite females within major occupational categories, this improves the relative position of Negro females in 1950 but makes no significant change in their actual position in 1960. This is largely a consequence of the fact that for many occupational categories Negro females have median incomes as high as, or higher than, white females in the same occupation at the present time. Thus nearly all of the difference in median income between white and Negro females is a consequence of the occupational distributions of the two groups. While "equal pay for equal work" is an important goal for Negroes, the major income gains for Negroes are to be made in an improved occupational distribution.

Table 6 shows the actual occupational distribution of white and Negro males and females in the South in 1940, 1950, and 1960. This table also shows an index of gain for Negroes for the 1940–50 period and for the 1950–60 period. This index of gain shows the relative gains in employment of Negroes in occupational categories after adjustments have been made for changes in the proportion of Negroes employed and for changes in the proportion of the population employed in a specific occupational category. One of the major changes shown in this table is the decline in importance of agriculture in the employment of Negroes. In 1950, approximately 50 percent of Negro males employed in the South were in agriculture. In 1960 less than 19 percent were so employed. The occupational group showing the greatest gain in percentage of Negro males employed was the category of operatives.

Among Negro females, there was a decline between 1950 and 1960 from 20 to 6 percent in agriculture employment. The greatest gains among Negro females were in the service workers other than private household category.

The indices of gain for Negroes in the South indicate that important occupational gains were made between 1940 and 1950 and that the relative gains were less between 1950 and 1960.

A decline in relative employment as farm laborers would represent an economic gain, but between 1950 and 1960 both Negro males and females showed relative gains in employment as farm laborers. This may seem surprising in view of the conclusion of the previous section, that Negroes were moving out of rural areas at higher rates than were whites. It must be remembered that rural residence and agricultural employment are not the same thing. Whites are moving out of agricultural employment in the South at higher rates than are Negroes.

The change that probably represents the greatest economic gain for Negroes was the relative gain in employment of males as operatives. The relative gains were not large, but the number employed in this occupational category makes the gain impressive. There were large relative gains among Negro males in clerical employment but the total number involved was relatively small.

Among Negro females, private household employment declined somewhat between 1940 and 1960, but 25 percent of the employed Negro females are in this occupation. It is also important to realize that between 1950 and 1960 the number of Negro females employed as private household workers in the South increased by approximately 100,000. The earlier examination of occupation by cohorts indicated that private household work was the occupation into which the majority of Negro females moved when leaving agricultural employment. An improvement in the level of training with consequent gains in the wages paid in this occupation would accomplish major gains in the economic level of southern Negroes.

TABLE 6.—*Distribution of employed by major occupational groups, for the South, by race and sex, 1940, 1950, and 1960, with index of gain for Negroes*

Sex and occupation	1940		1950		1960		Index of gain [1]	
	White	Negro	White	Negro	White	Negro	1940–50	1950–60
MALES: Number	8,031,771	2,372,423	9,620,949	2,369,515	10,276,214	2,118,185	.....	.....
Percent	100.0	100.0	100.0	100.0	100.0	100.0	.....	.....
Professional and technical	4.9	1.5	6.8	2.0	9.9	2.8	.93	.99
Managers and officials except farm	10.1	.9	11.3	1.4	12.6	1.4	1.42	.86
Farmers and farm managers	23.3	25.9	15.3	19.3	7.2	7.1	1.13	.79
Clerical	5.7	.6	5.8	1.6	6.6	2.9	2.73	1.56
Sales	6.1	.6	6.8	.8	7.7	1.0	1.31	1.01
Craftsmen	13.1	3.7	18.2	6.3	20.4	8.6	1.24	1.21
Operatives	15.8	10.9	18.3	18.4	19.1	22.3	1.46	1.17
Private household workers	.1	2.7	.1	.9	.1	.8	.67	1.04
Other service workers	3.3	8.4	3.5	10.2	4.0	12.7	1.14	1.10
Farm laborers	10.8	23.8	6.0	14.5	3.0	11.4	1.09	1.62
Other laborers	6.2	20.5	5.7	23.3	5.2	23.1	1.23	1.08
Occupation not reported	.7	.5	1.3	1.3	4.0	5.9	1.34	1.45
FEMALES: Number	2,058,160	1,195,485	3,268,858	1,203,850	4,759,167	1,414,932	.....	.....
Percent	100.0	100.0	100.0	100.0	100.0	100.0	.....	.....
Professional and technical	15.6	4.4	13.7	6.2	14.0	7.4	1.59	1.19
Managers and officials except farm	5.0	.6	5.4	1.3	4.8	1.0	1.94	.88
Farmers and farm managers	2.4	3.8	.9	2.5	.5	1.0	1.71	.72
Clerical	22.4	.5	29.2	2.3	31.5	3.5	3.49	1.42
Sales	8.7	.4	10.8	1.1	9.6	1.0	2.48	1.15
Craftsmen	.8	.1	1.3	.4	1.2	.4	1.98	1.38
Operatives	21.1	5.0	19.3	9.3	17.0	8.5	2.04	1.05
Private household workers	7.8	58.2	2.9	44.7	3.4	45.0	2.05	.87
Other service workers	10.4	8.6	10.5	17.8	11.3	20.8	2.06	1.08
Farm laborers	3.7	16.6	3.0	11.4	1.0	4.8	.85	1.28
Other laborers	.8	.9	.6	1.2	.4	.9	1.83	1.05
Occupation not reported	1.4	.7	2.1	1.7	5.2	5.4	1.66	1.31

Source: Sixteenth Census of the U.S. 1940. Population, Vol. III. The Labor Force, Tables 62-63; Census of Population: 1950. Vol. II. Characteristics of the Population, Pt. 1, Table 159; Census of Population, 1960. General Social and Economic Characteristics, U.S. Summary, Table 103; Subject Report PC(2)–1C. Nonwhite Population by Race, Table 32.

[1] Value of 1.00 indicates no change in the relative proportion of Negroes in the occupation; values greater than 1.00 indicate gains in relative employment of Negroes; values less than 1.00 indicate losses in relative employment.

Table 7 shows the occupational distribution of Negroes and whites in the total United States in 1940, 1950, and 1960. This table also shows the indices of relative gain in Negro employment by occupations for the total United States.

Detailed Occupations

Information regarding employment by detailed occupations and characteristics of individuals employed in detailed occupations is not available on a regional basis. However, an examination was made of Negro employment in detailed occupations at the national level and some of the findings are doubtless true within the southern region. One of the findings that stands at the national level and which the previous tables indicate is also true at the regional level is improvement in occupational characteristics of Negro females relative to Negro males. Negro females are improving more rapidly than Negro males in employment characteristics, in levels of education, and in relative income.

The examination of detailed occupations and their characteristics also indicates that most of the major gains in employment of Negroes have been made in occupations in which a significant proportion of the nonwhites have been employed by government. This indicates that government employ-

TABLE 7.—*Distribution of employed by major occupational groups, for the United States, by race and sex, 1940, 1950, and 1960, with index of gain for Negroes*

Sex and occupation	1940		1950		1960		Index of gain [1]	
	White	Negro	White	Negro	White	Negro	1940–50	1950–60
MALES: Number	30,718,353	2,930,902	36,830,187	3,499,697	39,486,118	3,640,851	......	......
Percent	100.00	100.00	100.00	100.00	100.00	100.00	......	......
Professional and technical	5.92	1.82	7.85	2.16	10.93	3.10	.90	1.03
Managers and officials except farm	10.06	1.27	11.56	1.93	11.49	1.73	1.40	.90
Farmers and farm managers	14.13	21.17	10.04	13.27	5.61	4.27	.88	.58
Clerical	7.16	1.19	6.76	3.05	7.15	5.05	2.72	1.57
Sales	6.82	.80	6.93	1.11	7.40	1.33	1.37	1.12
Craftsmen	16.01	4.45	19.70	7.70	20.50	9.81	1.41	1.22
Operatives	18.62	12.54	20.01	21.10	19.56	24.43	1.57	1.18
Private household workers	.17	2.92	.09	1.03	.08	.73	.67	.80
Other service workers	5.20	12.16	5.11	13.26	5.19	13.96	1.11	1.04
Farm laborers	7.00	19.85	4.23	10.29	2.32	6.90	.86	1.22
Other laborers	7.58	21.28	6.63	23.66	5.60	20.32	1.27	1.02
Occupation not reported	.74	.55	1.10	1.45	4.18	8.37	1.77	1.52
FEMALES: Number	9,563,583	1,542,273	13,794,932	1,869,956	18,537,787	2,446,620	......	......
Percent	100.00	100.00	100.00	100.00	100.00	100.00	......	......
Professional and technical	14.66	4.27	13.27	5.60	13.77	7.16	1.45	1.23
Managers and officials except farm	4.30	.71	4.71	1.31	4.04	1.03	1.68	.92
Farmers and farm managers	1.09	3.00	.61	1.66	.53	.58	.99	.40
Clerical	24.08	.85	30.51	3.97	32.63	7.55	3.78	1.78
Sales	8.07	.49	9.44	1.36	8.71	1.47	2.37	1.17
Craftsmen	1.09	.15	1.62	.62	1.27	.64	2.78	1.31
Operatives	20.31	6.24	19.82	14.65	15.75	12.69	2.41	1.09
Private household workers	10.93	59.52	4.02	41.37	4.14	35.74	1.89	.84
Other service workers	11.48	10.36	11.28	18.82	12.46	21.36	1.85	1.03
Farm laborers	1.21	12.87	2.20	7.47	.91	2.88	.32	.93
Other laborers	.89	.84	.71	1.52	.46	1.00	2.27	1.02
Occupation not reported	1.29	.69	1.81	1.65	5.33	7.90	1.71	1.63

Source: Sixteenth Census of the U.S. 1940. Population, Vol. III. The Labor Force, Tables 62-63; Census of Population: 1950. Vol. II. Characteristics of the Population, Pt. 1, Table 159; Census of Population, 1960. General Social and Economic Characteristics, U.S. Summary, Table 103; Subject Report PC(2)-1C. Nonwhite Population by Race, Table 32.

[1] Value of 1.00 indicates no change in the relative proportion of Negroes in the occupation; values greater than 1.00 indicate gains in relative employment of Negroes; values less than 1.00 indicate losses in relative employment

ment at the local, State, and National levels has been an important factor in improving the occupational and economic status of Negroes.

The examination of detailed occupations again emphasizes the importance of occupational distribution in affecting median incomes of whites and nonwhites. In terms of reducing the differences in income it would seem that for males some efforts might be directed at reducing discriminatory rates of pay for nonwhites, but the greater potential gains for both males and females lie in education and training for higher level occupations and in the reduction of discriminatory practices that make it difficult for nonwhites to enter certain occupations.

Rural Occupations

In table 8 we see the occupational distributions of the Negro population in rural areas of the South, by sex, for 1950 and 1960. In this table the changing numbers in each category are more impressive than is the changing occupational distribution. The decrease in the number of Negroes in rural farm areas and the increase in the number in rural nonfarm areas is in part a consequence of the changing definitions of rural nonfarm and rural farm between 1950 and 1960. If we combine these two categories for 1950 and 1960 we see that there were approximately 1,200,000 Negro males employed in rural areas of the South in 1950 and slightly over

800,000 in 1960, a reduction of approximately one-third. On the other hand, the number of Negro females in the rural labor force in the South in 1950 and 1960 was approximately stable at 400,000. It is surprising that the number of Negro males in the labor force of the rural South would decline by approximately one-third between 1950 and 1960 while the female labor force was approximately stable. In general, decreasing proportions of Negro females are in the labor force, but here in the rural South we find an increasing proportion of females.

In the earlier sections of this report we saw that there was an increasing rate of outmigration of Negroes from the rural South and at the same time an increasing proportion of Negroes in agriculture. This is reflected in an increased proportion of Negro males classed as farm laborers between 1950 and 1960. A relatively high proportion of rural Negro females were classed as being in professional and technical occupations, but this is almost certainly due to rural Negro school teachers.

Summary

In this section we have seen the large shifts out of agricultural employment by Negro males and females during their first 10 or 15 years in the labor force. Negro males tend to shift into the craftsmen and operative occupations as well as into the classification of laborers other than agriculture. Negro females tend to shift into private household work with some shift into clerical and sales among more recent cohorts. Projections indicate that there will continue to be shifts into clerical and sales occupations by males and females, and males will increase their proportion in craftsmen and operative occupations. Both males and females will show large shifts out of agriculture, and there will be declines in proportions of Negro females in private household work.

In the southern region as in the rest of the country, most of the difference in median income of whites and nonwhites is due to differences in occupational distribution rather than to differences in rates of pay within occupations.

The improvements in occupational distribution of Negroes were greater during the 1940–50 decade than during the 1950–60 decade. Occupations in which there has been a significant proportion of government employment have shown greatest gains for Negroes.

While agriculture is the main source of employment of rural Negroes, significant numbers of rural Negro males in the South are employed in operative and other laborer categories. Significant proportions of rural Negro females in the South are employed as private household workers and in professional and technical occupations.

The most important shift in occupations of Negroes is the shift out of agriculture. The shift of Negro females into clerical and sales occupations and into professional and technical occupations is not matched by a corresponding move of Negro males into these occupations.

Education

In considering the education of southern Negroes we will not consider the differential quality of education in essentially Negro schools as compared with education in essentially white schools. Differential expenditures in the past are an indication of

TABLE 8.—*Occupational distribution of the Negro population in rural areas of the South, by sex, 1950 and 1960*

Occupation	Male				Female			
	Rural nonfarm		Rural farm		Rural nonfarm		Rural farm	
	1950	1960	1950	1960	1950	1960	1950	1960
Total: Number	464,870	550,178	779,674	289,166	208,493	302,314	191,122	94,400
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional and technical	2.1	1.9	0.4	0.5	6.4	6.5	4.6	5.4
Farmers and farm managers	4.1	6.3	56.1	38.5	0.6	1.3	15.9	10.4
Managers, officials, proprietors	2.1	0.9	0.2	0.3	1.8	0.9	0.4	0.4
Clerical	1.4	0.9	0.2	0.3	1.7	1.1	0.8	0.5
Sales	.....	0.6	.....	0.2	.....	0.7	.....	0.6
Craftsmen and foremen	6.5	7.5	1.1	2.4	0.1	0.3	0.1	0.2
Operatives	23.8	24.1	5.1	9.4	7.8	7.9	2.1	4.2
Private household workers	0.9	0.7	0.2	0.3	59.5	51.6	15.0	37.3
Other service workers	6.0	6.8	0.6	1.6	14.0	15.1	3.7	7.5
Farm laborers and foremen	20.1	20.3	29.2	36.3	9.5	9.9	53.8	30.0
Other laborers	31.4	26.3	6.2	8.3	1.5	1.1	0.5	0.6
Occupation not reported	1.6	3.7	0.9	2.0	2.2	3.6	3.1	2.9

Source: U.S. Census of Population: 1950. Vol. IV. Special Reports. Pt. 3, Ch. B. Nonwhite Population by Race; U.S. Census of Population: 1960. Subject Reports. Nonwhite Population by Race. Final Report, PC(2)–1C. Table 32.

differences in quality of education but relatively little additional data are available.

In 1960 the differences between whites and nonwhites in percentage enrolled in school was very slight through age 13. After age 13, nonwhite enrollment tends to drop off at a faster rate than does white enrollment, and this leads to the differentials in median years of school completed.

In looking at school enrollment it is important to consider both age and grade in which enrolled. We have defined educational retardation as being enrolled in school in grades below those normal for that age. Educational advancement is defined as being enrolled in school in grades above those normal for that age. The usual stereotype of the Negro population leads us to expect more educational retardation among Negroes than among whites. The patterns of educational retardation are shown in figures 5 and 6. In these figures we see that the highest levels of educational retardation are among nonwhites in the rural farm South. For example, of the rural farm males 19 years of age who are retarded in school, more than 90 percent are nonwhite. At age 19 anyone not having graduated from high school is classed as educationally retarded. The rate of educational retardation increases sharply to age 19 and then drops.

Among whites there is a slight drop in level of educational retardation about age 15 or 16. This is probably a consequence of educationally retarded children dropping out of school when they would have reached the age when school attendance is not compulsory. Among nonwhites, however, there is not a drop in educational retardation at this point, which would indicate that school dropouts among nonwhites at this age are not selective of the educationally retarded as they seem to be among whites.

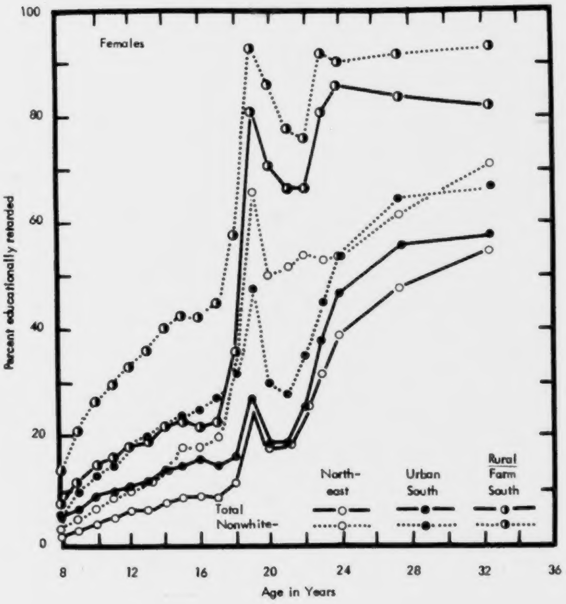

FIGURE 6.—Percentage of females educationally retarded among those enrolled in school, by age and color, for the Northeast and for the rural farm and urban portions of the South, 1960.

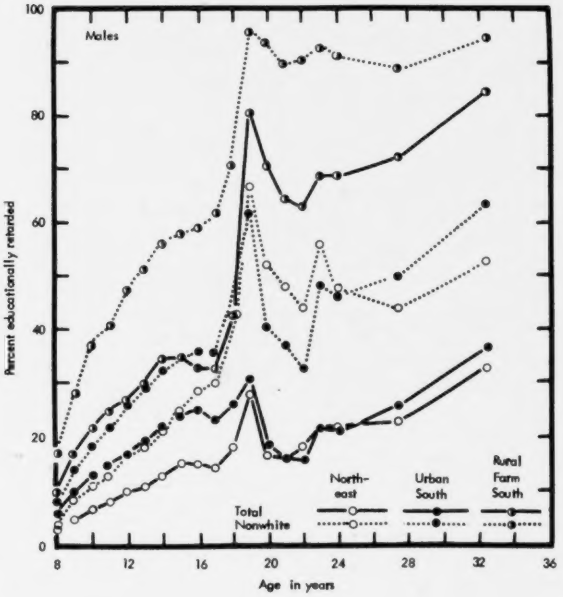

FIGURE 5.—Percentage of males educationally retarded among those enrolled in school, by age and color, for the Northeast and for the rural farm and urban portions of the South, 1960.

In addition to higher rates of educational retardation among nonwhites, we also find higher rates of educational advancement. (See figs. 7 and

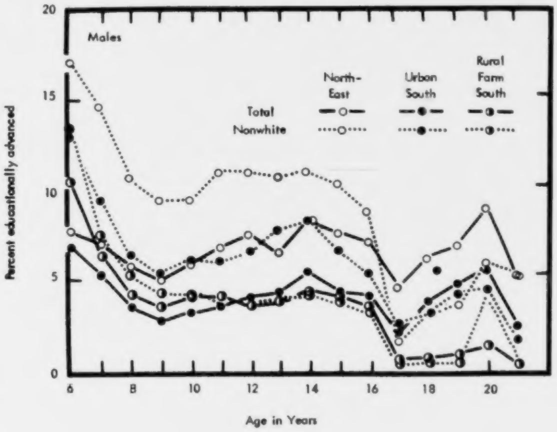

FIGURE 7.—Percentage of males educationally advanced among those enrolled in school, by age and color, for the Northeast and for the rural farm and urban portions of the South, 1960.

8.) These higher rates of educational advancement probably result from early enrollment of children in the first grade. It is also possible that the quality of education available in essentially Negro schools is such that some ambitious Negro children are skipped a grade in order to maintain their interest in school. The rates of educational advancement drop sharply for both whites and Negroes at age 17, indicating that many of these educationally advanced children do not graduate in regular sequence and either drop out of school or drop back a year and graduate with their regular age group.

The higher rates of educational advancement and educational retardation among nonwhites, particularly in the rural South, indicate that the teacher in an essentially Negro school in the rural South is facing a wider age range of children in any grade than is a teacher in a corresponding grade in a white school. This further complicates the already difficult educational problem.

Leaving the question of school enrollment, let us consider the levels of education achieved by whites and nonwhites in Southern States. Table 9 shows the median years of school completed by whites and nonwhites in 11 Southern States, by rural and urban portions of the States, for 1950 and 1960. This table also shows the difference in median years of school completed by whites and nonwhites in these States. The very low average levels of education of nonwhites in the rural portions of these States raise important questions about economic opportunities for poorly educated individuals regardless of color. For example, in rural Louisiana in 1960, 50 percent of the rural nonwhite population had less than a fifth-grade education.

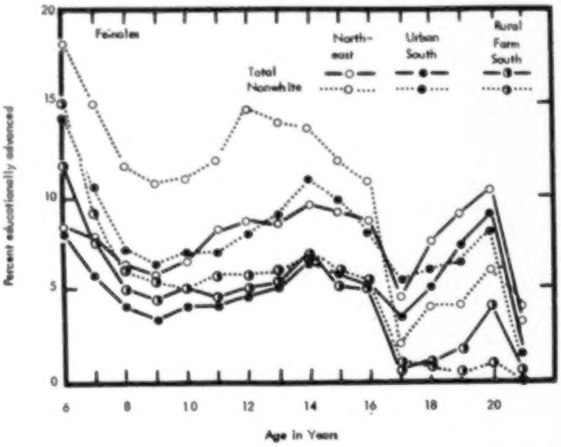

FIGURE 8.—Percentage of females educationally advanced among those enrolled in school, by age and color, for the Northeast and for the rural farm and urban portions of the South, 1960.

TABLE 9.—*Median years of school completed by whites and nonwhites in 11 Southern States, by residence, 1950 and 1960*

State and color	State total			Urban		Rural	
	1940	1950	1960	1950	1960	1950	1960
Alabama:							
White	8.2	8.8	10.2	10.8	11.6	7.9	8.7
Nonwhite	4.5	5.4	6.5	6.2	7.3	4.5	5.5
Difference	3.7	3.4	3.7	4.6	4.3	3.4	3.2
Arkansas:							
White	8.4	8.7	9.5	11.0	11.7	8.3	8.6
Nonwhite	5.2	5.6	6.5	6.5	7.2	5.1	5.9
Difference	3.2	3.1	3.0	4.5	4.5	3.2	2.7
Florida:							
White	9.3	10.9	11.6	11.7	12.0	9.0	10.4
Nonwhite	5.2	5.8	7.0	6.3	7.4	4.6	5.8
Difference	4.1	5.1	4.6	5.4	4.6	4.4	4.6
Georgia:							
White	8.1	8.8	10.3	10.4	11.7	7.9	8.8
Nonwhite	4.2	4.9	6.1	5.6	6.8	4.1	5.1
Difference	3.9	3.9	4.2	4.8	4.9	3.8	3.7
Louisiana:							
White	8.1	8.8	10.5	10.2	11.6	7.4	8.6
Nonwhite	3.9	4.6	6.0	5.6	6.8	3.5	4.6
Difference	4.2	4.2	4.5	4.6	4.8	3.9	4.0
Mississippi:							
White	8.9	9.9	11.0	12.1	12.2	8.9	9.8
Nonwhite	4.7	5.1	6.0	6.1	7.0	4.8	5.6
Difference	4.2	4.8	5.0	6.0	5.2	4.1	4.2
North Carolina:							
White	7.7	8.6	9.8	10.4	11.5	7.9	8.8
Nonwhite	5.1	5.9	7.0	6.7	7.6	5.5	6.5
Difference	2.6	2.7	2.8	3.7	3.9	2.4	2.3

TABLE 9.—*Median years of school completed by whites and nonwhites in 11 Southern States, by residence, 1950 and 1960*—Continued

State and color	State total 1940	State total 1950	State total 1960	Urban 1950	Urban 1960	Rural 1950	Rural 1960
South Carolina:							
White	8.5	9.0	10.3	10.3	11.6	8.2	9.3
Nonwhite	3.9	4.8	5.9	5.7	6.8	4.4	5.4
Difference	4.6	4.2	4.4	4.6	4.8	3.8	3.9
Tennessee:							
White	8.3	8.6	9.0	10.6	11.1	8.1	8.4
Nonwhite	5.8	6.5	7.5	6.9	7.9	5.5	6.4
Difference	2.5	2.1	1.5	3.7	3.2	2.6	2.0
Texas:							
White	8.9	9.7	10.8	10.7	11.4	8.6	9.1
Nonwhite	6.1	7.0	8.1	7.4	8.5	6.0	6.9
Difference	2.8	2.7	2.7	3.3	2.9	2.6	2.2
Virginia:							
White	7.9	9.3	10.8	11.5	12.1	7.8	8.6
Nonwhite	5.1	6.1	7.2	6.9	7.9	5.3	6.2
Difference	2.8	3.2	3.6	4.6	4.2	2.5	2.4

Source: United States Census of Population: 1960. General Social and Economic Characteristics. State volumes. Table 47.

Note: Underlined differences indicate an increase in the educational gap.

It is important to consider the effects of migration on educational level of southern Negroes. It is well established that migrants are better educated than nonmigrants. Part of this is due to the fact that migrants are younger than nonmigrants, but even in the same age group migrants are better educated than nonmigrants. Given the high rates of outmigration of Negroes from the South described earlier, it is important to look at the effects on levels of education. Referring again to table 9, we see here proof that between 1950 and 1960 there was a general widening of the educational gap between whites and nonwhites in the South.

In order to make adjustments in age and to see more clearly the effects of migration, information has been assembled on the educational level of cohorts. The differences in levels of education of whites and nonwhites in these similarly aged cohorts are shown in table 10. For example, in this table we can look at the rural farm males in Alabama. Among those aged 25 to 34 in 1940, the whites had 3.5 years more education. This same

TABLE 10.—*Difference in median years of school completed by whites and nonwhites in selected age groups, 11 Southern States, by residence and sex, 1940, 1950, and 1960*

State, residence and sex	25–34 years, 1940	35–44 years, 1950	45–54 years, 1960	25–34 years, 1950	35–44 years, 1960	25–34 years, 1960
Alabama:						
Urban:						
Males	5.0	4.9	4.9	4.6	4.4	3.0
Females	4.6	4.4	4.3	2.9	3.8	1.8
Rural farm:						
Males	3.5	3.1	3.4	2.8	3.6	3.5
Females	2.5	2.1	2.4	2.0	2.4	2.5
Arkansas:						
Urban:						
Males	4.9	4.9	4.8	4.6	4.5	3.1
Females	4.6	4.7	4.5	4.0	4.0	2.4
Rural farm:						
Males	2.3	2.5	2.4	2.2	2.5	3.2
Females	1.7	2.0	1.7	2.1	2.1	2.9
Florida:						
Urban:						
Males	5.3	6.0	6.0	5.1	4.9	3.7
Females	5.0	5.3	5.3	4.3	4.1	2.4
Rural farm:						
Males	3.8	3.9	(1)	3.0	(1)	(1)
Females	3.3	3.6	(1)	3.3	(1)	(1)

TABLE 10.—*Difference in median years of school completed by whites and nonwhites in selected age groups, 11 Southern States, by residence and sex, 1940, 1950, and 1960*—Continued

State, residence and sex	25–34 years, 1940	35–44 years, 1950	45–54 years, 1960	25–34 years, 1950	35–44 years, 1960	25–34 years, 1960
Georgia:						
Urban:						
Males	5.3	5.0	5.4	4.8	5.1	3.6
Females	4.7	4.5	4.8	4.3	4.3	2.5
Rural farm:						
Males	3.9	3.5	4.0	3.6	4.7	5.2
Females	2.9	2.6	3.0	2.9	3.8	3.8
Louisiana:						
Urban:						
Males	4.6	4.8	4.7	5.3	5.1	4.0
Females	4.5	4.5	4.4	4.7	4.6	2.7
Rural farm:						
Males	3.8	3.5	3.7	3.8	5.7	5.2
Females	3.5	3.1	3.1	3.4	3.8	4.1
Mississippi:						
Urban:						
Males	5.8	5.2	6.1	5.5	5.4	4.4
Females	5.2	5.4	5.1	4.8	4.5	3.1
Rural farm:						
Males	4.0	4.2	4.1	4.0	4.5	4.9
Females	3.6	3.5	3.7	3.8	4.2	4.5
North Carolina:						
Urban:						
Males	4.6	3.6	3.9	3.6	4.3	2.7
Females	4.6	3.8	3.8	3.5	3.6	1.7
Rural farm:						
Males	3.9	3.6	4.8	2.3	5.2	5.1
Females	2.2	1.8	1.3	2.1	1.4	1.5
South Carolina:						
Urban:						
Males	6.2	4.9	4.8	4.5	5.3	3.9
Females	5.8	4.3	4.8	4.0	4.5	2.8
Rural farm:						
Males	4.6	3.7	4.3	3.5	5.0	4.4
Females	4.5	3.5	4.1	3.2	4.5	4.4
Tennessee:						
Urban:						
Males	3.7	4.0	3.8	4.2	4.9	2.8
Females	3.6	3.6	3.6	3.5	3.5	2.0
Rural farm:						
Males	2.2	3.2	3.3	1.5	1.8	1.3
Females	1.2	1.4	1.5	1.1	1.6	1.8
Texas:						
Urban:						
Males	2.5	3.6	3.5	3.5	3.5	1.9
Females	3.4	3.4	3.2	2.7	2.5	1.0
Rural farm:						
Males	2.3	1.4	2.4	2.1	3.2	3.1
Females	2.2	2.1	2.5	2.3	3.0	3.0
Virginia:						
Urban:						
Males	4.2	4.8	4.9	4.2	4.3	2.6
Females	4.4	3.7	4.6	3.7	3.5	1.6
Rural farm:						
Males	2.7	2.6	2.8	2.0	2.9	3.2
Females	2.2	1.9	2.2	1.8	3.1	3.3

Note: Underlined differences indicate an increase in the educational gap.

Sources: Derived from U.S. Census of Population: 1940, Vol. IV. Characteristics by Age, Pt. 2, Table 19; U.S. Census of Population: 1950, Vol. II. Characteristics of the Population, Pt. 2, State Table 65; U.S. Census of Population: 1960. Vol. I. Characteristics of the Population, Pt. 2, State Tables 103.

[1] The Census does not give rural farm data for nonwhites in Florida in 1960 because of the small number.

group, aged 35 to 44 in 1950, had reduced this differential slightly to 3.1 years of education. However, by 1960 when they were 45 to 54 years of age the gap had widened again to 3.4 years of schooling. Continuing with rural farm males in Alabama and taking those who were 25 to 34 years of age in 1950, we see that the educational gap between whites and nonwhites in this group was 2.8 years. By 1960 when they were 35 to 44, the educational gap had widened to 3.6 years. Since there is very little change in the educational level of individuals after age 25, the changes in educational level of these cohorts are the result of selective outmigration. Examining the data shown in this table, we conclude that the educational gap was widening more rapidly between 1950 and 1960 than between 1940 and 1950. The widening of the educational gap was more prevalent in rural farm areas and more frequent among males than among females.

In addition to examining the educational gap between white and nonwhite cohorts, it is possible to examine the educational gap among those 25 to 34 years of age in 1940, 1950, and 1960. In the urban areas of these States the educational gap in this younger age group was less in 1960 than it had been in 1950 or 1940. Therefore, even though the educational gap widens as a cohort ages, each successive cohort is starting with a smaller educational gap. This indicates good prospects in the long run for a narrowing educational gap in the urban areas of these States.

The rural farm areas present a different picture. The educational gap between whites and nonwhites 25 to 34 years of age was wider in 1960 than in 1950 or 1940. Not only is the educational gap widening as a cohort ages but each succeeding cohort is starting with a wider gap. Thus, we are faced with a continually widening gap in educational levels of whites and nonwhites in rural farm areas of the Southern States.

We have attributed the changes in the educational gap between Negroes and whites in the South to patterns of selective migration. It is almost certain that this is the basic factor. However, a recent census publication[1] reports a surprising trend that will have some important long-range effects if it is not reversed. The data show that a larger proportion of whites than nonwhites aged 18 to 24 are enrolled in school; but it is surprising to learn that since 1955 the difference in proportion of whites and nonwhites in this age group enrolled in school has been increasing. The fact that the gap in school enrollment at ages 18 to 24 is increasing will produce an increasingly wide gap in the proportion of Negroes and whites with a college education. A further concern is the fact that only 59 percent of the nonwhites in this age group that are enrolled in school are in college, whereas 87 percent of the whites who are in this age group in school are now in college. This is part of the picture of educational retardation discussed earlier.

The educational level of rural Negroes in the South is improving, but the higher rates of outmigration of better educated Negroes is serving to widen the educational gap between Negroes and whites in rural areas of the South. The outmigration of better educated Negroes from the South should not be discouraged because the individuals involved are doubtless better off socially and financially after migration. However, it is well to consider at least some of the possible consequences in the South. In the first place, this outmigration leads to the loss of some of the indigenous leadership that might help secure better conditions for southern Negroes. Also the widening of the educational gap will serve many segregationists as rationalization for continued discrimination. Within the Negro population itself, the present educational level precludes large improvements in economic position. Major gains in education relative to the white population are important if the expectations held for the Negro population of the South are to be fulfilled. The goal must be an improved quality and level of education for all youth in the South, white and Negro.

Income

In this section we will examine the median incomes in 1959 of white and nonwhite males and females in urban and rural farm portions of the Southern States. We will also look at relative incomes in 1949 and 1959 and incomes in 1949 and 1959 by age and education.

Table 11 shows the median income of individuals by sex and color for urban and rural farm portions of Southern States for 1959. In the 11 Southern States examined, we see that white males in urban areas had the highest median incomes in Virginia, with Louisiana a close second. In rural farm areas white males had the highest median income in Florida, with Texas a fairly close second. The lowest median income for white males in urban areas was in Arkansas—$3,522. The lowest median income in rural farm areas for white males was in Tennessee—slightly over $1,400. Among white females in urban areas, Virginia and North Carolina had the highest median incomes with Arkansas showing the lowest median income for white females in urban areas as it did for white males.

In urban areas, nonwhite males like white males had their highest median income in Virginia, with Florida being in second place. The lowest median income for nonwhite males in urban areas, as for white males, was in Arkansas—less than $1,500. In rural farm areas, nonwhite males (as did white males) had the highest median income in Florida—slightly over $1,000.

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[1] Current Population Reports: Population Characteristics. Ser. P–20. No. 162, March 24, 1967. "School Enrollment: October, 1965."

TABLE 11.—*Median income of persons 14 years and over, by color and sex, for urban and rural farm portions of 11 Southern States, 1959*

State and residence	White		Nonwhite	
	Male	Female	Male	Female
Alabama:				
Urban	$4,347	$1,485	$1,963	$692
Rural farm	1,540	761	694	386
Arkansas:				
Urban	3,522	1,226	1,455	619
Rural farm	1,576	578	714	327
Florida:				
Urban	4,006	1,401	2,261	908
Rural farm	2,461	931	1,085	497
Georgia:				
Urban	4,202	1,696	1,947	785
Rural farm	1,746	928	770	368
Louisiana:				
Urban	4,510	1,462	2,018	827
Rural farm	1,989	849	770	420
Mississippi:				
Urban	3,866	1,427	1,559	583
Rural farm	1,510	780	637	325
North Carolina:				
Urban	3,717	1,744	1,953	783
Rural farm	1,721	792	721	337
South Carolina:				
Urban	3,721	1,638	1,679	644
Rural farm	1,966	1,029	709	340
Tennessee:				
Urban	4,024	1,481	2,025	765
Rural farm	1,435	780	720	354
Texas:				
Urban	4,178	1,340	2,218	833
Rural farm	2,170	741	841	398
Virginia:				
Urban	4,527	1,805	2,405	892
Rural farm	1,869	837	951	404

Source: U.S. Census of Population: 1960. General Social and Economic Characteristics. State Tables No. 67.

Among nonwhite females in urban areas the highest median income was in Florida, and this was still less than $1,000. The lowest median income for nonwhite females in urban areas was in Mississippi—$583. Nonwhite females in rural farm areas had their highest median income in Florida (slightly less than $500), and the lowest median income was in Mississippi—$325. (Arkansas had a median income of $327 for nonwhite females in rural areas.)

Poverty is usually measured in terms of family income, but the level of income in an area should be such that all members of a family do not have to work in order to keep the family above the poverty level. Therefore, these figures on individual income are more relevant for identifying areas of needed improvement than are figures on family income. It is obvious that rural farm income in these Southern States is insufficient to maintain most families above the poverty level. It is also obvious that the income of nonwhites even in urban areas makes it difficult to maintain a family above the poverty level.

Table 12 shows the percentage which nonwhite income is of white income in urban and rural farm areas in 1949 and 1959. Looking first at the relative income of white and nonwhite males in urban areas, we see that the relative position of nonwhite males deteriorated between 1950 and 1960 in each of the 11 States examined. Indications are that this deterioration has continued at the national level between 1960 and 1965. The median incomes of both whites and nonwhites increased between 1950 and 1960, but the white incomes increased more rapidly

A portion of the increasing white-nonwhite difference is doubtless due to the increasing gap in income between higher level occupations and lower level occupations. This gap has increased for both whites and nonwhites, but since nonwhites are concentrated mainly in lower income occupations the increase in this gap in occupational incomes is reflected in an increase in the differential between white and nonwhite incomes.

We see a similar decrease in relative income of nonwhite females in urban areas between 1950 and 1960 although the relative declines are not as great in as many areas, and in Florida and Texas the relative income position of nonwhite females actually improved between 1950 and 1960.

The relative incomes of white and nonwhite males in rural farm areas in 1949 shows a mixed picture. In some States, such as Alabama and North Carolina, nonwhite males were relatively much

TABLE 12.—*Nonwhite income as a percentage of white income, in urban and rural farm portions of 11 Southern States, by sex, 1949 and 1959*

State and residence	Male		Female	
	1949	1959	1949	1959
Alabama:				
Urban	57.0	45.2	50.3	46.6
Rural farm	26.0	45.1	59.7	50.7
Arkansas:				
Urban	50.8	41.3	52.0	50.5
Rural farm	56.1	45.3	85.4	56.6
Florida:				
Urban	56.7	56.4	62.5	64.9
Rural farm	62.1	44.1	72.8	53.4
Georgia:				
Urban	54.4	46.3	48.2	46.3
Rural farm	52.7	44.1	67.4	39.8
Louisiana:				
Urban	52.9	44.7	65.4	56.6
Rural farm	64.0	38.7	70.1	49.5
Mississippi:				
Urban	54.4	40.3	52.4	40.9
Rural farm	55.2	42.2	76.5	41.7
North Carolina:				
Urban	58.3	52.5	51.6	45.0
Rural farm	35.1	41.9	34.9	42.6
South Carolina:				
Urban	50.4	45.1	83.3	39.3
Rural farm	49.3	36.1	62.5	33.0
Tennessee:				
Urban	59.1	50.3	55.1	51.7
Rural farm	66.4	50.2	69.4	45.4
Texas:				
Urban	58.2	53.1	61.0	62.2
Rural farm	46.3	38.8	74.4	53.8
Virginia:				
Urban	58.5	53.1	52.3	49.4
Rural farm	66.7	50.9	67.9	48.3

Source: Derived from U.S. Census of Population: 1950. Characteristics of the Population. State Tables 88; U.S. Census of Population: 1960. General Social and Economic Characteristics. State Tables 67.

worse off in rural farm areas than in urban areas. In other States, such as Arkansas, Florida, Louisiana, Tennessee, and Virginia, the nonwhite males were relatively better off in rural farm areas than in urban areas. With the exception of Alabama and North Carolina the relative position of nonwhite rural farm males deteriorated between 1950 and 1960. Only in Arkansas and Mississippi were nonwhite males relatively better off in rural farm areas than in urban areas in 1959. Thus we see that between 1950 and 1960 the income position of nonwhite males in both urban and rural farm areas deteriorated.

In all of the States considered except North Carolina the relative position of nonwhite females in rural farm areas deteriorated between 1950 and 1960. In most of the States the deterioration in relative position was quite large. In Mississippi, for example, nonwhite females in rural farm areas had an income that was slightly more than 75 percent of the income of white females, whereas in 1960 the median income was less than 42 percent that of white females.

Since there has been a heavy outmigration of better educated younger nonwhites from the South, it is important to look at these relative incomes by age and level of education. Unfortunately this information is not available by urban and rural portions of States. It is available for the South as a whole and is shown in table 13 for both the South and the United States. In most educational categories below high school education the relative position of nonwhites deteriorated in the South between 1950 and 1960 with some exceptions at the youngest and oldest ages. In the rest of the country the relative position of nonwhites in these age-by-education groups also deteriorated, although not in as many categories as for the South.

At the lowest levels of education the nonwhite males were generally better off, relatively speaking, in the South than in the rest of the United States. Although their incomes were actually lower in the South, their income relative to the income of whites was more favorable. Among the better educated nonwhite males—that is, those with some college education—their position relative to the position of whites generally improved between 1950 and 1960 both in the South and in the nation. This group, however, showed relatively better earnings outside the South than in the South.

TABLE 13.—*Median income of nonwhites as a percentage of median income of total population in age and education categories, by sex, for the South and the United States, 1950 and 1960*

Sex, age group, and area	Elementary education (years)						High school education (years)				College education (years)				
	1 to 4		5 to 7		8		1 to 3		4		1 to 3		4+	4	5+
	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1960
MALES															
18 to 19:															
U.S.	88	85	81	83	67	68	78	85	79	78	97	84	....	....	....
South	94	94	85	86	70	77	71	85	75	80	97	87	....	....	....
20 to 21:															
U.S.	87	78	75	73	78	70	77	71	75	68	74	72	....	....	....
South	93	92	84	79	83	69	74	68	76	71	63	70	....	....	....
22 to 24:															
U.S.	87	80	82	73	75	70	70	66	74	66	82	71	81	70	94
South	93	87	84	77	81	72	69	68	60	64	70	67	....	76	....
25 to 29:															
U.S.	83	80	79	74	74	69	71	68	73	70	67	71	67	70	69
South	87	84	81	75	75	71	67	67	62	63	57	59	63	63	67
30 to 34:															
U.S.	83	74	74	71	74	68	70	67	70	69	68	70	62	64	71
South	87	83	77	72	74	67	65	62	60	59	59	63	57	57	65
35 to 44:															
U.S.	80	79	72	72	66	73	67	70	67	72	63	67	59	58	66
South	87	80	75	73	72	68	63	61	59	58	53	56	56	51	61
45 to 54:															
U.S.	71	79	70	71	70	71	66	67	63	68	59	64	56	53	63
South	85	84	76	74	67	67	60	60	63	55	48	50	51	50	60
55 to 64:															
U.S.	55	70	65	66	69	68	65	65	63	67	59	62	52	48	66
South	82	78	73	68	64	65	62	55	51	51	49	50	48	43	65
65 to 74:															
U.S.	67	67	64	74	61	77	55	68	63	62	60	52	43	49	81
South	79	83	70	68	56	70	51	64	47	58	....	54	....	44	....
75+:															
U.S.	74	81	72	71	77	76	59	69	....	71	....	74	....	62	....
South	92	91	76	81	61	72	....	59	....	55	....	75	....	....	....
FEMALES															
18 to 19:															
U.S.	75	82	76	84	63	86	73	90	52	73	82	98	....	....	....
South	86	90	83	90	77	88	78	87	48	72	79	90	....	....	....
20 to 21:															
U.S.	77	79	78	85	56	80	47	76	48	48	68	91	....	105	....
South	85	88	82	89	71	84	34	74	38	43	55	79	....	....	....
22 to 24:															
U.S.	76	83	76	82	66	78	62	75	56	58	58	66	90	92	89
South	87	89	85	86	69	77	57	73	41	45	50	44	90	98	....
25 to 29:															
U.S.	82	82	74	82	71	74	71	76	63	74	76	93	88	100	95
South	90	89	84	84	71	78	66	69	50	49	72	66	88	101	101
30 to 34:															
U.S.	76	83	74	77	73	71	75	78	74	83	75	104	96	123	105
South	89	90	75	81	73	67	68	66	59	54	71	79	99	114	107

TABLE 13.—*Median income of nonwhites as a percentage of median income of total population in age and education categories, by sex, for the South and the United States, 1950 and 1960*—Continued

Sex, age group, and area	Elementary education (years)						High school education (years)				College education (years)				
	1 to 4		5 to 7		8		1 to 3		4		1 to 3		4+	4	5+
	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1950	1960	1960
FEMALES Continued															
35 to 44:															
U.S.	72	83	70	70	68	72	71	73	70	84	76	97	95	113	101
South	90	88	75	78	70	67	66	60	57	57	73	66	97	106	103
45 to 54:															
U.S.	65	80	68	62	64	61	65	61	62	68	65	78	85	92	90
South	88	89	74	77	63	64	64	54	53	51	67	62	91	98	95
55 to 64:															
U.S.	67	85	67	81	73	68	61	56	66	61	61	63	81	85	82
South	89	92	81	86	65	78	57	57	53	49	72	64	87	95	90
65 to 74:															
U.S.	85	93	80	90	74	90	70	80	55	75	64	61	63	73	78
South	95	97	86	94	77	90	72	77	47	80	....	66	....	79	....
75+:															
U.S.	81	92	85	92	81	89	89	87	90	81	....	73	....	49	....
South	94	96	91	94	79	90	....	88	....	89	....	87	....	....	....

Source: U.S. Census of Population. 1950. Vol. IV. Special Reports Pt. 5, Ch. B. Education, Table 13. U.S. Census of Population. 1960. Subject Reports Educational Attainment. Final Report DC(2)–5B. Tables 6 and 7.

We can conclude that when nonwhite males fitted the stereotype of very little education they were relatively better off in the South than in the rest of the nation. However, when they achieved education beyond high school, they were relatively better off in other parts of the nation. The better educated nonwhite males also improved their incomes relative to whites during the 1950–60 decade.

Looking at nonwhite females, we see that those with an eighth-grade education or less generally showed improvement in their relative income position between 1950 and 1960 and also tended to be relatively better off in the South than in the rest of the country. Among nonwhite females with higher levels of education—that is, education at the high school level or beyond—we see different trends between the younger and older groups. Among the younger, better educated groups the relative incomes tended to improve in both the South and the nation between 1950 and 1960. The older, better educated groups tended to have deteriorating incomes between 1950 and 1960 in the South but continued improvement outside the South.

Both in the South and in the rest of the country several groups of nonwhite females under 45 years of age with 4 or more years of college had median earnings in excess of the median earnings of the white females of the same age and level of education. Thus, among young Negro males and females with a high level of education, we find improvement in their relative income positions between 1950 and 1960; but only among females do we find median income in excess of that of whites.

Fertility, Marital Status, and Dependency Ratios

The patterns of fertility among nonwhites in the South are too well known to take up space with documentation. People in the southern regions have higher rates of fertility than others in the United States, rural southerners have higher rates of fertility than urban southerners, and Negro southerners have higher rates of fertility than white southerners. The highest rates of fertility are among rural southern Negroes. These patterns of fertility exist with few exceptions in all Southern States. In general, between 1950 and 1960 white fertility did not increase as much as nonwhite fertility, and in some of the Southern States (Florida, Georgia, South Carolina, and Tennessee) urban white fertility actually declined between 1950 and 1960.

With two exceptions nonwhite fertility increased between 1950 and 1960 in urban and rural areas. These two exceptions are interesting. In North Carolina rural nonwhite fertility declined slightly between 1950 and 1960 although white fertility in both urban and rural areas and nonwhite fertility in urban areas increased during this same period. In South Carolina between 1950 and 1960 there was a decline in fertility rates for whites in both urban and rural areas and among nonwhites in rural areas, only urban nonwhites showed an increase in fertility rates.

The differences in fertility discussed above are reflected in changing size of household. Table 14 shows the size of household for the urban and rural portions of each of the Southern States for 1950 and 1960. Almost without exception the average size of nonwhite households increased between 1950 and 1960. Only in the rural farm areas of Georgia and Virginia and in the urban areas of North Carolina and Maryland did the average size of nonwhite households decrease slightly between 1950 and 1960. By contrast, in nearly all areas of these same Southern States the average size of white households declined between 1950 and 1960. The exceptions for whites occurred in Florida, Georgia, Kentucky, and Missouri. In portions of these States there was an increase in the average size of white households.

TABLE 14.—*Size of household in 15 Southern States, by color and residence, 1950 and 1960*

State and residence	Nonwhite		White	
	1950	1960	1950	1960
Alabama:	4.14	4.21	3.71	3.42
Urban	3.74	3.89	3.40	3.27
Rural nonfarm	3.88	4.47	3.73	3.58
Rural farm	3.52	5.41	4.21	3.71
Arkansas:	3.73	3.95	3.55	3.21
Urban	3.23	3.53	3.16	3.00
Rural nonfarm	3.53	4.10	3.52	3.27
Rural farm	4.32	4.99	3.95	3.62
Florida:	3.66	4.18	3.15	3.39
Urban	3.58	3.80	2.98	3.24
Rural nonfarm	3.63	4.59	3.44	3.56
Rural farm	4.37	5.55	3.91	3.67
Georgia:	4.10	3.79	3.65	2.99
Urban	3.61	3.72	3.36	2.90
Rural nonfarm	3.98	3.99	3.68	3.28
Rural farm	5.23	4.74	4.18	3.44

Table 14.—*Size of household in 15 Southern States, by color and residence, 1950 and 1960*—Continued

State and residence	Nonwhite		White	
	1950	1960	1950	1960
Kentucky:	3.34	3.44	3.74	3.47
Urban	3.14	3.33	3.32	3.19
Rural nonfarm	(1)	3.64	(1)	3.73
Rural farm	(1)	4.14	(1)	3.69
Louisiana:	3.89	4.03	3.54	3.40
Urban	3.57	3.77	3.36	3.28
Rural nonfarm	3.77	4.31	3.66	3.60
Rural farm	4.82	5.44	4.05	3.68
Maryland:	4.16	4.09	3.46	3.38
Urban	4.01	3.99	3.35	3.32
Rural nonfarm	4.41	4.36	3.63	3.52
Rural farm	(1)	5.27	(1)	3.73
Mississippi:	4.11	4.37	3.64	3.38
Urban	3.40	3.73	3.28	3.21
Rural nonfarm	3.49	4.31	3.55	3.46
Rural farm	4.71	5.35	4.07	3.62
Missouri:	3.34	3.46	3.20	3.06
Urban	(1)	3.41	(1)	2.99
Rural nonfarm	(1)	3.64	(1)	3.12
Rural farm	(1)	4.80	(1)	3.31
North Carolina:	4.63	4.48	3.79	3.45
Urban	3.85	3.79	3.46	3.23
Rural nonfarm	4.34	4.70	3.70	3.56
Rural farm	5.78	5.79	4.32	3.73
Oklahoma:	3.67	3.63	3.25	3.03
Urban	3.32	3.41	3.05	2.97
Rural nonfarm	(1)	4.02	(1)	3.07
Rural farm	4.36	4.43	3.69	3.32
South Carolina:	4.53	4.59	3.76	3.49
Urban	3.70	3.86	3.45	3.30
Rural nonfarm	4.25	4.76	3.80	3.63
Rural farm	5.48	5.81	4.31	3.76
Tennessee:	3.78	3.89	3.70	3.41
Urban	3.48	3.70	3.35	3.20
Rural nonfarm	(1)	4.07	(1)	3.60
Rural farm	4.86	5.07	4.16	3.65
Texas:	3.49	3.60	3.40	3.33
Urban	3.30	3.51	3.30	3.32
Rural nonfarm	3.60	3.82	3.51	3.36
Rural farm	4.10	4.33	3.63	3.35
Virginia:	4.24	4.15	3.62	3.40
Urban	3.80	3.80	3.30	3.23
Rural nonfarm	4.40	4.52	3.78	3.62
Rural farm	5.08	5.05	4.22	3.66

Source: U.S. Census of Population: 1950. Vol. II. Characteristics of the Population, Table 59; U.S. Census of Population: 1960. Vol. I. Characteristics of the Population, Table 49.

[1] Not available.

The larger size of nonwhite households combined with the increasing size means that nonwhite households would have to have a higher family income than white households in order to have a similar level of living. These differentials in size of household accentuate even further the nonwhite poverty shown in the discussion of incomes in the previous section.

Another aspect of this same problem is shown by looking at the dependency ratio. The dependency ratio is the ratio of individuals under 15 and over 65, to individuals 15 to 65 years of age. All individuals under 15 and over 65 are not dependent nor are all individuals between 15 and 65 in the labor force, but the ratio of these two age groups does give some indication of the load of support that must be borne by potential labor force members. Table 15 shows the dependency ratios for the urban and rural portions of these Southern States for 1940, 1950, and 1960.

From table 15 it is clear that nonwhites in general have higher dependency ratios than whites, which is to be expected given the larger average size of nonwhite households. This table also shows the trends in dependency ratios for whites and nonwhites. These trends are similar for all of the Southern States. Among whites the dependency ratio increased in urban and rural farm areas from 1940 through 1960. For rural farm areas the white dependency ratio increased from 1940 to 1950, then declined again in 1960. In 1960 the rural nonfarm area of each of the Southern States had the highest

Table 15.—*Dependency ratios in 15 Southern States, by color and residence, 1940, 1950, and 1960*

State and year	White				Nonwhite			
	Total	Urban	Rural nonfarm	Rural farm	Total	Urban	Rural nonfarm	Rural farm
Alabama:								
1940	56.8	40.8	58.3	67.8	64.0	51.6	57.8	83.1
1950	59.8	48.9	67.5	63.1	75.0	59.3	53.8	99.2
1960	64.5	61.0	71.1	63.1	91.8	82.9	104.9	104.2
Arkansas:								
1940	57.4	39.9	56.1	66.2	57.8	39.9	54.1	66.4
1950	63.3	50.4	68.3	71.8	75.8	59.1	79.4	88.8
1960	67.8	62.9	74.6	66.1	101.1	91.9	108.2	111.2
Florida:								
1940	48.5	41.0	54.9	64.8	45.7	37.2	51.0	73.9
1950	60.8	47.8	61.0	68.3	55.6	47.2	67.5	84.9
1960	66.8	65.8	70.3	63.5	76.3	73.6	84.8	96.5
Georgia:								
1940	52.7	40.3	50.4	65.8	61.8	43.1	57.7	81.4
1950	56.8	47.7	60.8	70.1	72.2	55.1	79.5	98.7
1960	63.0	60.4	67.0	62.7	86.5	77.8	98.2	104.0
Kentucky:								
1940	59.9	43.4	62.2	70.2	47.5	39.4	54.6	64.0
1950	64.2	48.5	70.9	73.7	54.8	49.7	60.2	73.2
1960	70.9	65.7	77.6	69.9	77.4	78.0	75.7	76.8
Louisiana:								
1940	50.7	39.3	56.8	64.3	58.6	42.4	58.8	75.0
1950	56.0	48.1	66.7	68.5	73.8	59.8	85.0	96.7
1960	66.8	63.5	75.0	64.4	92.1	85.2	103.9	105.0
Maryland:								
1940	44.6	39.8	49.4	56.2	48.3	41.8	55.2	69.4
1950	50.3	47.1	56.1	63.5	53.3	48.8	61.9	76.5
1960	53.0	61.8	64.6	66.9	72.6	71.2	76.4	84.2
Mississippi:								
1940	66.6	39.8	53.4	65.9	66.1	42.4	52.5	75.3
1950	59.6	46.8	61.5	69.4	82.9	58.8	76.5	96.5
1960	65.9	61.6	71.6	64.9	103.8	89.3	110.7	112.4
Missouri:								
1940	47.9	39.0	54.8	59.1	41.6	36.8	60.3	63.9
1950	54.7	47.4	69.5	64.9	50.8	47.3	76.7	69.7
1960	67.6	64.8	77.7	65.6	78.1	76.7	87.4	105.5
North Carolina:								
1940	56.2	41.1	55.9	66.8	64.5	44.5	61.0	81.8
1950	57.0	45.7	59.2	68.5	72.6	52.7	73.5	92.6
1960	60.9	57.3	63.6	62.7	86.6	74.2	92.3	101.3
Oklahoma:								
1940	54.5	43.4	57.9	64.5	55.9	42.6	62.3	74.5
1950	58.5	51.1	68.4	65.7	71.1	60.6	81.5	84.0
1960	66.0	64.4	73.1	60.0	89.3	87.1	94.3	89.1
South Carolina:								
1940	54.1	40.8	54.3	90.2	72.2	48.9	64.7	84.9
1950	57.7	48.9	61.5	73.6	84.5	61.5	90.1	103.6
1960	61.4	59.4	63.0	63.2	95.8	82.4	101.4	107.3
Tennessee:								
1940	55.6	41.2	59.8	64.7	49.8	39.1	54.4	70.6
1950	59.2	47.8	66.8	68.9	59.1	50.3	65.2	85.3
1960	64.0	60.1	69.7	64.1	82.7	78.4	88.7	101.7
Texas:								
1940	51.4	44.0	54.8	60.8	52.9	37.8	56.0	74.0
1950	55.2	51.2	63.3	61.8	59.4	49.6	72.3	80.0
1960	67.3	66.4	72.2	64.9	79.1	75.4	91.6	90.7
Virginia:								
1940	51.2	37.5	54.5	64.2	57.8	41.0	60.1	75.5
1950	44.9	44.0	60.2	67.8	61.3	48.7	67.1	83.1
1960	61.1	57.4	66.7	64.6	77.3	70.3	84.8	89.3

Source: Derived from Sixteenth Census of the United States: 1940. Population. Vol. II. Characteristics of the Population, Table 7; United States Census of Population: 1950. Vol. II. Characteristics of the Population, Table 1[illegible]; United States Census of Population: 1960. Vol. I. Characteristics of the Population, Table 37.

white dependency ratio with the urban and rural farm areas having similar dependency ratios, the rural farm areas generally being slightly higher.

Among nonwhites we see some similar patterns but with much greater relative increases. The white and nonwhite ratios were relatively similar in 1940 with the nonwhite dependency ratio being higher in most States. By 1960 no Southern State had a white dependency ratio that even approached the nonwhite dependency ratio for that State. Nonwhites in urban, rural nonfarm, and rural farm areas showed large increases in dependency ratios from 1940 to 1960, with rural farm areas having the highest dependency ratios in practically all States. Nine out of the fifteen Southern States had nonwhite rural farm dependency ratios of over 100. The highest rural farm white dependency ratio was less than 70. This means that in rural farm areas every 100 nonwhites of labor force age had approximately 100 others not in the labor force ages to support; whereas among whites in these rural farm areas every 100 individuals of labor force age had approximately 65 of nonlabor force age to support. The combination of these differential dependency ratios with the large differential in white and nonwhite rural farm income indicates the extent of poverty among rural farm Negroes.

The differences in dependency ratios are not as large in urban and rural nonfarm areas as in rural farm areas but still indicate the greater economic burden upon the Negroes in the labor force. If present trends continue, and there is every indication that they are continuing, the poverty condition of rural farm Negroes will get progressively worse.

An additional characteristic of Negro families should be considered and this is whether or not the family has a male head. The general stereotype of Negro families is that they have female heads. This is true for 30 to 40 percent of urban Negro households. The pattern of female-headed households is an urban pattern and is not present in more than 10 or 15 percent of rural Negro households.

The important question is the trend in female-headed households. We can get some indication of this by looking at marital status of females by cohorts. Figure 9 shows the percentage in various female cohorts that are married with spouse absent. Each cohort is identified by the year in which its members were 15 to 19 years of age. (Data for 1965 are shown for the cohorts of 1950 and 1960 but not for earlier cohorts since the data were not available.) This figure shows very clearly the much higher proportion of females married with spouse absent among nonwhites than among whites at the national level and also shows the trend toward increasing proportions of females married with spouse absent among nonwhites.

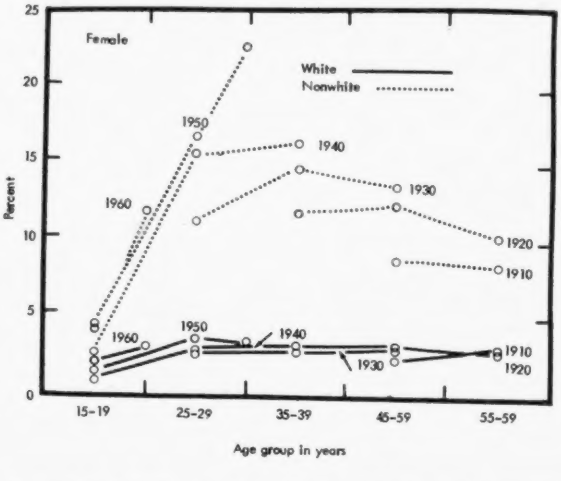

FIGURE 9.—Percentage of female cohorts married with spouse absent, by age and color, with cohorts identified by year in which members were 15 to 19 years of age.

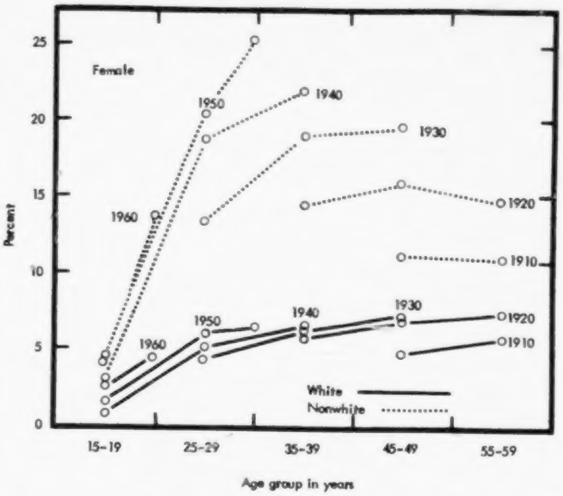

FIGURE 10.—Percentage of female cohorts married with spouse absent or divorced, by age and color, with cohorts identified by year in which members were 15 to 19 years of age.

In order to get a more equitable comparison, divorced females have been combined with those married and spouse absent and the results are shown in figure 10. Here we see the same pattern as in figure 9. The data by cohorts indicate an increasing trend toward higher proportions of Negro females divorced or married with spouse absent, which means increasing proportions of female-headed households. These figures are for the United States total, but table 16 gives comparable data for 1950, 1960, and 1965 for the southern region. The data in this table indicate the same patterns for the South as for the rest of the country—an increasing trend toward female-headed households.

In this section we have seen the higher fertility of southern Negroes compared with southern whites and the still higher fertility of rural Negroes compared with urban Negroes. The results of these higher fertility rates are reflected in larger average size households for nonwhites. These higher fertility rates combined with high rates of outmigration for young adults lead to increasingly high dependency ratios among southern Negroes, particularly in rural areas. All of these factors indicate increasing burdens of support upon the head of household. We have also seen the increasing proportion of female heads of Negro households. Since Negro females have lower earnings than Negro males, we are left with the conclusion that there is an increasing burden of support among households that are increasingly female-headed. This would indicate a trend toward a general worsening of the poverty situation among southern Negroes.

Summary

In this examination of the Negro population of the South we have seen the declining proportion of the Negro population in the South and the even more rapid decline in numbers of Negroes in the rural farm areas of the South. The largest numbers of rural farm Negroes are in Mississippi and North Carolina. The rates of outmigration of Negroes from the South are increasing, although the total number of outmigrants is beginning to decline because of the decreasing number of Negroes in the South. The highest rates of outmigration are from the rural farm areas of the South. The urban areas of the South continue to gain in Negro population although at decreasing rates. This implies that increasing proportions of Negro migrants from the South are going to northern urban centers. Negro

TABLE 16.—*Marital status and presence of spouse, by age, color, and sex, for the South, 1950, 1960, and 1965*

[Data in percent]

Year, sex, color, and age	Total	Single	Married		Widowed	Divorced
			Spouse present	Spouse absent		
1950						
Males:						
White:						
15 to 19	100.0	95.6	3.5	.7	.1	.1
20 to 24	100.0	53.1	42.6	3.0	.1	1.2
25 to 29	100.0	19.3	74.8	3.7	.2	1.9
30 to 34	100.0	10.5	83.9	3.3	.3	2.1
Nonwhite:						
15 to 19	100.0	95.4	3.4	1.1	.1	.....
20 to 24	100.0	52.5	38.4	7.9	.4	.7
25 to 29	100.0	22.9	63.6	11.4	.7	1.4
30 to 34	100.0	13.1	72.2	11.8	1.1	1.8
Females:						
White:						
15 to 19	100.0	75.9	21.5	1.9	.1	.5
20 to 24	100.0	24.7	69.5	3.6	.5	2.0
25 to 29	100.0	9.7	83.2	3.3	1.0	2.7
30 to 34	100.0	7.3	82.9	4.8	2.1	2.9
Nonwhite:						
15 to 19	100.0	77.6	17.4	4.5	.3	.3
20 to 24	100.0	30.0	53.8	13.2	1.2	1.8
25 to 29	100.0	13.2	66.3	15.2	2.6	2.7
30 to 34	100.0	8.4	70.3	14.0	4.3	3.0
1960						
Males.						
White:						
15 to 19	100.0	94.9	3.9	1.2	.0	.1
20 to 24	100.0	48.9	45.2	4.3	.1	1.3
25 to 29	100.0	16.8	77.3	3.8	.2	1.9
30 to 34	100.0	9.1	85.2	3.3	.3	2.2
Nonwhite:						
15 to 19	100.0	96.2	2.5	1.2	.1	.1
20 to 24	100.0	57.2	33.6	8.4	.2	.6
25 to 29	100.0	26.3	59.6	12.1	.5	1.4
30 to 34	100.0	16.1	67.6	13.1	.9	2.3
Females:						
White:						
15 to 19	100.0	78.6	18.1	3.0	.1	.5
20 to 24	100.0	22.2	69.8	5.5	.3	2.1
25 to 29	100.0	7.6	84.9	4.2	.6	2.7
30 to 34	100.0	5.0	87.0	3.7	1.2	3.0
Nonwhite:						
15 to 19	100.0	83.9	11.6	4.0	.2	.2
20 to 24	100.0	36.2	47.0	14.5	.8	1.5
25 to 29	100.0	15.9	61.6	17.2	2.2	3.1
30 to 34	100.0	9.6	65.0	17.4	4.0	4.0

TABLE 16.—*Marital status and presence of spouse, by age, color, and sex, for the South, 1950, 1960, and 1965*—Continued

[Data in percent]

Year, sex, color, and age	Total	Single	Married			Widowed	Divorced
				Spouse absent			
			Spouse present	Armed forces	Separated and other		
1965							
Males:							
White:							
14 to 19	100.0	95.6	3.8	. . . . .	.4	. . . . .	. . . . .
20 to 24	100.0	43.7	52.1	. . . . .	3.3	.1	.6
25 to 29	100.0	10.9	83.4	. . . . .	3.5	. . . . .	2.2
30 to 34	100.0	5.8	89.1	. . . . .	2.7	.2	2.1
Nonwhite:							
14 to 19	100.0	99.7	. . . . .	. . . . .	.6	. . . . .	. . . . .
20 to 24	100.0	59.2	35.0	. . . . .	5.3	.8	. . . . .
25 to 29	100.0	22.0	67.4	. . . . .	9.6	1.1	. . . . .
30 to 34	100.0	12.1	74.5	. . . . .	6.7	.7	3.2
Females:							
White:							
14 to 19	100.0	84.3	14.3	.4	.8	. . . . .	.1
20 to 24	100.0	24.4	69.3	1.7	2.9	. . . . .	1.8
25 to 29	100.0	6.9	84.5	1.2	3.5	1.1	2.9
30 to 34	100.0	4.7	87.9	.8	3.6	.8	2.3
Nonwhite:							
14 to 19	100.0	91.3	6.0	1.0	1.5	. . . . .	.3
20 to 24	100.0	33.1	49.8	3.4	12.0	1.0	.5
25 to 29	100.0	10.6	67.6	1.0	18.3	1.3	1.6
30 to 34	100.0	7.9	65.5	. . . . .	20.6	3.4	2.3

Sources: Derived from U.S. Census of Population: 1960. Vol. I. Characteristics of the Population. Pt. I. U.S. Summary, Table 242; U.S. Census of Population: 1950. Vol. I. Characteristics of the Population. Pt. I. U.S. Summary, Table 147. Bureau of the Census: Current Population Reports, Population Characteristics. Series P–20, No. 144. Marital Status and Family Status: March 1965, Tables 1, 3.

outmigrants seem less likely to move as family groups than do white outmigrants.

The movement of southern Negroes out of rural farm areas into urban areas is usually accompanied by a change in occupation. While significant proportions of rural southern Negroes are employed in operative and craftsmen occupations, most are employed in agriculture. Increasing proportions of rural Negro females are engaged in private household work. Negro females leaving agriculture tend to move into private household work, while Negro males tend to move into operative and craftsmen occupations. Projections indicate continuing declines in the number of Negroes employed in agriculture, especially among younger Negroes.

Negroes made greater occupational gains between 1940 and 1950 than between 1950 and 1960, doubtless as a consequence of World War II. Negro females continue to improve their occupational distribution more than do Negro males. Most of the occupations in which Negroes have shown the greatest gains have been those in which there has been a significant proportion of government employment.

A part of the more rapid occupational gains of Negro females is doubtless due to their greater educational gains. Negroes in the South are continuing to improve their average level of education, but the outmigration of better educated Negroes acts to widen the gap in educational level between Negroes and whites in the South. In southern urban areas the improved levels of education of younger Negroes more than compensates for the effects of outmigration of the better educated, so that we can expect the educational gap between Negroes and whites to decrease in these southern urban areas. In rural areas of the South, however, the trends indicate a further widening of the educational gap between Negroes and whites.

With the educational gap widening in rural areas it is not surprising to find that the relative income of nonwhites in rural areas is deteriorating. The relative income of southern nonwhites in both urban and rural areas has been deteriorating, but the deterioration has been greater in rural areas. Most of the income differential between whites and nonwhites is shown to be due to the occupational distribution of nonwhites rather than to income differences within occupations.

Young Negroes with some college education have been improving their relative income position, and among young Negro females with some college, many groups have higher median incomes than corresponding white females.

Combined with unusually low incomes, southern rural Negroes have unusually high fertility rates. These higher fertility rates are reflected in higher average sizes of family, which even further reduces the per capita income among nonwhites.

A matriarchal family is one of the usual stereotyped views of Negroes. In reality about 30 percent of urban Negro households have a female head, and the trends indicate that the percentage will increase. Female-headed households are largely an urban phenomenon among both Negroes and whites but are far more prevalent among Negroes. Young Negro females in rapidly increasing proportions are classified as divorced or married with spouse absent, even when those absent in military service are excluded from consideration.

The dependency ratio is the ratio of individuals under 15 and over 65 to individuals between 15 and 65, and gives some indication of the number that must be supported by each potential member of the labor force. The dependency ratio of Negroes has been increasing more rapidly than that of whites since 1940 and the increase has been especially rapid in rural farm areas. In the rural farm areas of most Southern States the dependency ratio is over 100 for Negroes, but is only about 65 for whites. The differences are in the same direction in urban and rural nonfarm areas but not as great. These dependency ratios of Negroes are the consequence of higher birth rates and of the heavy outmigration of young adults who generally do not move with family groups. The dependency ratios will doubtless continue to increase.

These dependency ratios indicate the higher burden of support that must be carried by the Negro members of the labor force. This increasingly high burden of support is combined in urban areas with increasing proportions of families with female heads and in rural areas with an increasing gap in education between whites and nonwhites. In both urban and rural areas the increasing dependency ratios are combined with increasing deterioration of nonwhite income relative to white income. Given the present trends, in both urban and rural areas of the South the outlook is for little if any improvement in the poverty level of Negroes.

Chapter 3

Rural Poverty: The Special Case of the Aged

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Introduction

In the flood of facts loosened in the course of the poverty program, certain characteristics—occupation, age, sex, education, regional location, color—are related to income in an effort to isolate the influence of a given factor on economic status.[1] After analyzing the extent to which low incomes are associated with each of these characteristics, however, Smolensky has concluded that these socioeconomic factors are not necessarily at the core of poverty (*11, pp. 50–51*):

> Aging is not a cause of poverty, nor is being non-white a cause of poverty, nor is living in the south a cause of poverty. . . . There is some unidentified agent which can produce poverty. Whether the carrier of this agent will in fact be poor is highly dependent upon whether he also possesses one or more of the poverty-linked characteristics.
>
> A second point . . . is that they are clearly interrelated. A very large proportion of the poor have more than one debilitating socio-economic characteristic. Southern, nonwhite and farm operator are poverty-linked characteristics often found together. Sixty-five percent of the aged poor have some other poverty-linked characteristic. . . .

The poverty-related factors of old age and rural residence merit special attention. Among persons living alone or with nonrelatives, the 1965 median income for those under 65 was almost 2½ times the median for persons aged 65 and over; for families with younger heads, the median was more than twice as high as that for older families. Within this lower income group, the rural elderly in turn have less money income per person or family than the aged living in urban areas. The double handicap of being both aged and of rural residence is further accentuated by the lower educational level of the elderly, and the particularly low educational attainment of the rural aged.

The discussion immediately following describes the economic position of the rural aged, providing wherever possible comparative data for the urban aged as well as the rural younger population. Income levels, asset ownership, and consumption patterns are presented, insofar as data permit. The discussion then turns to the causes of the relatively poorer position of the rural aged, noting particularly the overall shifts in occupational and the relation between low earnings during worklife and low retirement benefits. In conclusion, questions are raised regarding the implications of these and other long-run trends for the future status of the aged, and especially for the rural aged.

Current Economic Position

The long-run decline in labor-force activity of older men, causing many incomes to drop sharply for an increasing proportion of males at or near age 65, has in the past two decades been offset to some extent by an expansion in retirement benefits. Nine out of ten of the nation's 19 million older people have retirement protection of some sort—85 percent are eligible for social security and another 5 percent for civil service or railroad retirement benefits. About 15 percent of the aged draw private pensions. Of those persons reaching age 65 in 1965, 97 percent were covered by a public retirement program (*1, pp. 3–8*).

The amount of the benefit, however, is frequently far too low to raise the income above the poverty level; almost a third of the present aged are classified as poor. Another 10 percent, who would have been poor if they had relied on their own incomes, shared homes with relatives who were above the poverty line (*10, pp. 22–37*).

Money Incomes of the Aged

In 1965 the median income for families headed by persons aged 65 and over was $3,460, or 47 percent of the median of $7,352 for families headed by persons aged 14 to 64. For aged unrelated individuals the median was $1,348, which was only 40 percent of the median ($3,320) for younger single persons. Of the families with aged head, 43 percent had money incomes below $3,000; of the aged individuals living alone or with nonrelatives, 58 percent had incomes below $1,500. The corresponding proportions of younger families and single persons were 12 percent and 27 percent (table 1). Moreover, it is clear that although the incomes of the elderly have risen during this decade, the increases have been smaller than those accruing to the younger population. The relative income position of the aged has therefore worsened, particularly since 1962. Recent trends are summarized in table 2.

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[1] Material in this article draws on two earlier papers (*6, 7*). (Italic numbers in parentheses indicate references listed at the end of this paper.)

TABLE 1.—*Distribution of families and unrelated individuals by money income in 1965* [1]

Item	Families				Unrelated individuals			
	Distribution [2]		Cumulative [3]		Distribution [2]		Cumulative [3]	
	Heads 14 to 64 years	Heads 65 years and older	Heads 14 to 64 years	Heads 65 years and older	14 to 64 years	65 years and older	14 to 64 years	65 years and older
	Thous.	*Thous.*			*Thous.*	*Thous.*		
Number	41,384	6,895	.....	.....	7,452	4,680	.....	.....
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
All income groups	100.0	100.0	.....	.....	100.0	100.0	.....	.....
Under $1,000	2.7	4.7	2.7	4.7	18.1	32.1	18.1	32.2
$1,000–$1,499	1.9	8.0	4.6	12.7	8.7	25.6	26.8	57.9
$1,500–$1,999	2.1	10.7	6.7	23.4	6.8	13.8	33.6	71.8
$2,000–$2,499	2.6	9.6	9.3	33.0	7.3	8.9	40.9	80.7
$2,500–$2,999	2.8	9.7	12.1	42.7	5.2	3.8	46.1	84.5
$3,000–$3,499	3.4	7.9	15.5	50.6	6.1	3.2	52.2	87.7
$3,500–$3,999	3.3	6.8	18.8	57.4	5.1	2.8	57.3	90.5
$4,000–$4,999	7.9	9.2	26.7	66.6	10.9	3.3	68.2	93.8
$5,000–$5,999	9.7	7.3	36.4	73.9	10.2	1.8	78.4	95.6
$6,000–$6,999	9.9	5.6	46.3	79.5	7.1	1.4	85.5	97.0
$7,000–$7,999	10.5	4.8	56.9	84.3	4.8	1.1	90.3	98.1
$8,000–$8,999	8.8	3.6	65.7	87.9	3.2	0.5	93.5	98.6
$9,000–$9,999	7.0	2.4	72.7	90.3	1.8	0.4	95.3	99.0
$10,000–$14,999	19.1	6.0	91.9	96.3	3.5	0.4	98.8	99.4
$15,000–$24,999	6.6	2.7	98.5	99.0	1.0	0.5	99.8	99.9
$25,000 and over	1.5	1.0	100.0	100.0	0.2	0.1	100.0	100.0
	Dollars	*Dollars*			*Dollars*	*Dollars*		
Median income	7,352	3,460	.....	.....	3,320	1,348	.....	.....

Source: Administration on Aging, Department of Health, Education and Welfare; data from Current Population Survey, Bureau of the Census.

[1] By age groups (14 to 64 and 65 and older). Data are estimates derived from the March 1966 survey of a national probability sample of households; they are subject both to sampling variability and to errors in response and nonreporting.

[2] Distribution may not add to 100 percent because of rounding.

[3] Largest intervals in distribution adjusted to cumulate to 100 percent where necessary.

TABLE 2.—*Median incomes of families and unrelated individuals, 1960–65*

Item	1960	1961	1962	1963	1964	1965
Families:						
Head 14 to 64 years:						
Amount	$5,905	$6,099	$6,336	$6,644	$6,981	$7,352
Percent increase from year before	.....	3.3	3.9	4.9	5.1	5.3
Head 65 and older:						
Amount	$2,897	$3,026	$3,204	$3,352	$3,376	$3,460
Percent increase from year before	.....	4.4	5.9	4.6	0.7	2.5
Percent of 14 to 64 group	49.1	49.6	50.6	50.4	48.4	47.1
Unrelated individuals:						
14 to 64 years:						
Amount	$2,571	$2,589	$2,644	$2,881	$3,094	$3,320
Percent increase from year before	.....	0.7	2.1	9.0	7.4	7.3
65 years and older:						
Amount	$1,053	$1,106	$1,248	$1,277	$1,297	$1,348
Percent increase from year before	.....	5.0	12.8	2.3	1.6	3.9
Percent of 14 to 64 group	41.0	42.7	47.2	44.3	41.9	40.6

Source: Herman B. Brotman, "Income of Families and Unrelated Individuals, 1965," Administration on Aging, Department of Health, Education, and Welfare, Oct. 26, 1966.

When money income is used as the index, the elderly are heavily overrepresented in the ranks of the poor. The 1960 Census of Population revealed that 21 percent of all families had less than $3,000 per year. But among the aged the proportion was much higher, and among the rural aged (farm and nonfarm) almost two out of three families received money incomes of less than $3,000 (table 3).

Table 3.—*Percent of families with incomes of $3,000 or less, by age and place of residence, 1959*

Age of family head	Urban	Rural nonfarm	Farm
Under 25 years of age	29	36	57
25 to 64 years of age	12	22	43
65 years of age or older	41	64	64

Source: *Poverty in Rural Areas,* U.S. Dept. Agr., Agr. Econ. Rpt. No. 63, 1964 (table 10).

Families headed by young and old persons are much more likely to fall in the poverty group, whether they are rural or urban. Within each place-of-residence grouping, families in the middle age span, being of prime working age, enjoy the highest incomes. Young families are less well off, but even they are poor much less frequently than the aged. Holding age group constant, the income varies by place of residence, with the urban resident being much less poverty-prone than either of the rural groups. The rural nonfarm and rural farm elderly thus have poverty-level money incomes much more frequently than either the aged who live in urban areas, or the young or middle-aged families who live in rural communities.

The Poverty Sector of the Aged Population

Recognizing the shortcomings of a poverty index based on money income alone, various attempts have been made to take account of family size and composition, place of residence, and other relevant factors. Mollie Orshansky's "low-income level" and "poverty level" incomes, now widely used, permit a regrouping of the poor by age, household status, farm and nonfarm residence, and color. Estimating living costs under different circumstances, Miss Orshansky defines poverty and low income levels for selected family categories as indicated in table 4.

Table 4.—*Poverty and low income levels for unrelated individuals and 2-member families, 1965*

Item	Low income level		Poverty level	
	Under 65	65 and older	Under 65	65 and older
Unrelated individual:				
Nonfarm	$1,950	$1,805	$1,615	$1,500
Male	2,040	1,835	1,685	1,515
Female	1,880	1,790	1,560	1,495
Farm	1,380	1,265	1,140	1,055
Male	1,425	1,285	1,180	1,060
Female	1,315	1,255	1,090	1,045
2-member family:				
Nonfarm	2,810	2,545	2,100	1,890
Male head	2,835	2,550	2,110	1,895
Female head	2,665	2,500	2,025	1,880
Farm	1,980	1,785	1,475	1,325
Male head	1,985	1,785	1,480	1,325
Female head	1,860	1,760	1,410	1,325

Source: Mollie Orshansky, "Counting the Poor: Another Look at the Poverty Profile," *Social Security Bul.,* January 1965, pp. 3–29, and subsequent articles; summarized in above form in Herman B. Brotman, "Counting the Aged Poor, 1965," Administration on Aging, Department of Health, Education, and Welfare, February 1967.

On the basis of these income criteria, comparisons may be drawn showing the proportions of the young and the elderly who are in the low income and poverty sectors (table 5).

In summary, about 7.4 million, or 42 percent of the 17.6 million noninstitutionalized aged, were living on low incomes. Almost 5.3 million, or 30 percent of the aged not living in institutions, had incomes below the poverty level. These proportions were approximately double the percentages of the population under age 65. By these criteria, the aged constitute 9 percent of the total noninstitutional population, but 16 percent of all the poor. Among unrelated persons, who are particularly susceptible to poverty, the aged account for 39 percent of the total but 56 percent of the poor (*10, p. 5*).

Within the aged sector of the population, place-of-residence comparisons may be drawn, using the data from the Social Security Administration's 1963 Survey of the Aged (table 6). Metropolitan couples had incomes that were 40 to 45 percent higher than the nonmetropolitan couples. Comparisons of median incomes for the nonmarried aged in the three localities revealed smaller absolute but in some instances even larger relative differences.

TABLE 5.—*Percentages of unrelated individuals and members of families below low income levels, by age groups*

Income level and age group	Total	Unrelated individuals	Members of families
Total, all ages	100.0	100.0	100.0
Below low income	24.7	46.5	23.2
Near poor	7.6	6.7	7.7
Poor	17.1	39.8	15.5
Under 65	100.0	100.0	100.0
Below low income	22.9	33.7	22.5
Near poor	7.2	5.0	7.3
Poor	15.8	28.7	15.2
65 and older	100.0	100.0	100.0
Below low income	41.9	66.9	32.9
Near poor	12.0	9.4	12.9
Poor	29.9	57.5	20.0

Source: Mollie Orshansky, "Counting the Poor: Another Look at the Poverty Profile," *Social Security Bul.*, January 1965, pp. 3–29, and subsequent articles; summarized in above form in Herman B. Brotman, "Counting the Aged Poor, 1965," Administration on Aging, Department of Health, Education, and Welfare, February 1967.

Other characteristics of the metropolitan and nonmetropolitan aged are available from the 1963 Survey of the Aged. Among married couples, the family head outside metropolitan areas is somewhat older; 40 percent are aged 73 and over, as compared with 37 percent in the central cities and 38 percent in the suburbs. Nonmarried women outside metropolitan areas are also more often above age 72, but single men in the suburbs are older than those in either the central cities or in the rural areas. For both couples and single persons, homeownership is most frequent among those in suburbs and outside metropolitan areas. But unmarried persons own homes only about half as often as couples, regardless of the place of residence. The proportion of the aged owning their homes ranges from 82 percent of the couples in suburbs to 26 percent of the single men living in central cities.

Other than their homes, older persons own few assets. The median value is highest for the suburban elderly couples, and drops to almost $500 for the poorest groups—nonmarried men and women living outside metropolitan areas. About half the couples and 60 percent of the nonmarried persons living outside metropolitan areas had liquid assets valued at less than $500. (See table 7.)

In summary, about 30 percent of the noninstitutionalized aged can be classified as poor, using the more refined index of poverty that takes into account family size, place of residence, and other variables determining need. About 42 percent are living on low incomes. Classifying the elderly by place of residence reveals that those in metropolitan areas have much higher money incomes than those living outside metropolitan areas, and that liquid asset holdings are larger for metropolitan couples and single persons, particularly those in the suburbs,

TABLE 6.—*Median money income of aged units by residence, 1962*

Family unit	Total U. S.	Metropolitan: Central cities	Metropolitan: Suburbs	Outside metropolitan areas
Couple	$2,875	$3,420	$3,350	$2,365
Nonmarried men	1,365	1,440	1,695	1,135
Nonmarried women	1,015	1,165	1,090	910

Source: Data made available by the Social Security Administration.

TABLE 7.—*Asset ownership of couples and nonmarried persons aged 65 and over, by residence, 1962*

Asset value	Couples: Metropolitan areas: Central cities	Couples: Metropolitan areas: Suburbs	Couples: Outside Metropolitan areas	Nonmarried Men: Metropolitan areas: Central cities	Nonmarried Men: Metropolitan areas: Suburbs	Nonmarried Men: Outside Metropolitan areas	Nonmarried Women: Metropolitan areas: Central cities	Nonmarried Women: Metropolitan areas: Suburbs	Nonmarried Women: Outside Metropolitan areas
Median amount:									
Total other than owned home	$3,065	$3,300	$2,495	$575	$1,065	$525	$560	$800	$520
Liquid	1,980	1,665	565	330	1,120	60	390	495	170
	Pct.	*Pct.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*	*Pct.*
Percent having liquid assets of less than $500	34	34	49	53	41	61	52	50	58

Source: Data made available by the Social Security Administration.

than for older families and individuals outside metropolitan areas. Homeownership represents the major asset of the elderly; about four out of five elderly couples in suburbs and nonmetropolitan areas, and three out of five in central cities, own their homes. Among nonmarried persons the proportions owning homes range from one-half down to one-fourth. Data do not permit any general conclusions regarding the median value of the homes owned, or their adequacy in terms of the particular housing needs of older persons.

Other Indexes of Levels of Living

In addition to the Social Security Administration's poverty index, one may rely on certain other measures to indicate the extent to which particular groups approximate given levels of living. Housing conditions often form such a criterion, substandard housing denoting a low level of living in general. More specific criteria have been used by Cowhig (*2*) to provide rural-urban comparisons of household living levels: (1) availability of an automobile, (2) availability of a telephone, (3) hot and cold water piped inside the home, (4) dwelling units in sound condition, (5) a summary measure based on the proportion of households having items 1 through 4, and (6) housing units with 1.01 or more persons per room.

Summarizing the findings for all age groups, Cowhig (*2*) finds only minor differences between rural and urban households in their ownership of automobiles and in the proportion of homes with more than one person per room. On the basis of the other indexes, however, urban families fared better, with particularly marked differences appearing in the proportion of families having hot piped water inside the residence, and the proportion having homes in sound condition. The proportion of homes reporting all of the first four items ranged from 73 percent in urban to 44 percent in rural farm residences.[2]

These measures provide a basis for comparing the economic status of the rural and urban households headed by employed males, and throw some light on the status of older persons within the two groups. Among households headed by males aged 55 and over, the proportion having all the first four items as compared with all households in the sample is as follows:

	Percent of households by age of head	
	Age 14 and over	*Age 55 and over*
Total	69	66
Urban	73	70
Rural nonfarm	60	58
Rural farm	44	46

A higher proportion of households headed by males aged 35 to 54 had each item than was the case for households headed by either younger or older men. On the basis of other census reports, the author concluded that in 1960 about three-fourths of all nonfarm households headed by men aged 60 or over were in houses in sound condition with all plumbing facilities. By contrast, less than half the older farm families were similarly housed.

It is important to note that the four measures of levels of living in the Cowhig study rank only those urban and rural households which are headed by employed males, with the older group starting at age 55. The decline in level of living, as measured by median income, is quite pronounced for both rural and urban men after age 65 even when they continue working, largely because work after age 65 is likely to be part-time. For men who retire altogether, the drop in income is of course much more severe.

One further indicator of the comparative economic status of the rural aged is provided by the census data showing ownership of durables. All of the five selected durables (television set, freezer, air conditioner, washer, and dryer) were owned by less than 1 percent of all rural and urban older families. Of the families headed by persons aged 64 and under, about 2 percent owned all five durables. The proportions of families with none of these appliances were as follows: Older rural families, 8.4 percent; older urban families, 4.9 percent; all younger families, 3.4 percent (table 8).[3]

TABLE 8.—*Ownership of durables, by age of head of household and place of residence, 1960*

Item	65 and over			64 and under			All families
	Total	Rural	Urban	Total	Rural	Urban	
Percent of families with all appliances[1]	0.82	0.67	0.90	1.97	1.60	2.06	1.82
Percent of families with no appliances	6.11	8.43	4.96	3.40	4.84	2.82	3.77

Source: Calculated from the 1960 census data.

[1] Appliances include TV, freezer, air conditioner, washer, and dryer.

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[2] Data for Cowhig's study were derived from the 1-in-1,000 sample of tabulations from the 1960 Census of Population and Housing, and thus refer to the 36 million households headed by males employed in the civilian labor force. As the author notes, limiting his analysis to the group of households, while providing comparability, results in a more favorable picture than would result if data on unrelated individuals and households headed by women were included.

[3] Note that the proportion of urban older families having none of these durables is about two-thirds that of rural older families, and that the proportion of all younger families having none of the appliances is about one-half the proportion of all older families who lack all the appliances.

Consumption Patterns

Consumer expenditure data for urban, rural nonfarm, and farm families permit some general comparisons of the expenditure patterns, savings, and income levels of the different groups. Table 9 summarizes the income and expenditure data for all urban, rural nonfarm, and farm families, and for families headed by persons 65 to 74 and 75 and over, by place of residence. There are marked differences between the average money incomes of the rural nonfarm aged ($2,846 for families headed by 65- to 74-year-olds and $2,003 for families with head aged 75 and over), the incomes of the urban aged ($3,903 for the 65 to 74 age group and $3,013 for the 75-and-over age group), and those of the farm aged ($3,390 for the 65 to 74 age group and $2,455 for the 75-and-over age group). Average income of all families in the three areas varied also, the urban family receiving an average income of $5,829, or about one-third again as much as the farm family ($4,424) and about one-fourth again as much as the rural nonfarm family ($4,700). The average number of full-time earners is less favorable for the rural nonfarm elderly, and the educational level of the very old rural family head is lower. Home and automobile ownership are much more frequent among the rural nonfarm and farm families, both young and old.

Analysis of expenditures for current consumption by the elderly in the different areas reveals first the overriding factor of the difference in totals. The older urban family spent over $1,000 more per year on current consumption than the rural nonfarm family; the urban family with head aged 65 to 74 spent about $900 more, and the very old urban family over $1,000 more than the older rural nonfarm family. Some offset is afforded by the higher proportion of home and automobile ownership among the rural nonfarm. However, it should be noted that housing costs comprise almost one-third of the older rural nonfarm family's total consumption expenditure, and that the ownership of an automobile means that the rural nonfarm elderly are spending a larger percentage of their income for transportation than the urban aged.

A recent study of urban and rural differences in consumption patterns of older people concluded that in each place of residence the aged differ from the young in their income, expenditure, and savings patterns. But residential differences also are evident (*5, p. 345*):

> . . . Because older units in rural farm places experience comparatively less reduction in their income, and because the style of life characterizing rural farm units of all ages is more homogeneous, there results a somewhat lesser deviation in the consumer behavior of the aged compared with other age groups in rural farm places, as contrasted to urban and rural nonfarm areas.

For any very low income group, the amount of discretionary income is of course extremely small; expenditures of necessity are concentrated heavily on basic needs. For example, the oldest rural nonfarm families, whose incomes were the lowest of any elderly group, spent almost two-thirds of their total budget on food and shelter.

Economic Trends and the Rural Aged

Differences in the levels of living of the rural as compared with the urban population are many-faceted, and the special case of the rural aged can be explained only within the context of overall economic trends. Of particular import are the changes in farm output per man-hour and the related decline in the significance of agriculture as a source of employment. Paralleling these developments, there have been important shifts in the composition of employment in rural areas, with consequent impact on the rural population's incomes and consumption patterns (*3*).

Shifts in Occupational Structure

A long-run view of agricultural and nonagricultural employment reveals a very slow growth of farmworkers during the second half of the 19th century. By contrast, the nonagricultural labor force increased sixfold between 1860 and 1910. In the 1910–63 period, agricultural employment declined, the rate of decline being more rapid in recent years, while nonagricultural employment rose to about two and one-half times its 1910 level (*3, p. 19*). Between 1960 and 1963 agricultural employment fell 13½ percent, and an annual decline of 2 to 3 percent is expected during the next few years. By 1975, less than 1 out of 20 American workers will be farmers, as compared with the 1963 ratio of 1 in 15.[4]

The accelerated decline in farm employment is but one aspect of economy-wide changes in labor force composition made possible (and necessary) primarily by postwar improvements in technology. In broader terms, the postwar years have seen a much faster rise in employment in the service-producing than in the goods-producing industries. Employment by occupational group has shifted heavily in the direction of service workers, clerical and kindred workers, and professional, technical, and kindred workers. All of these trends are expected to continue.

Although the absolute and relative size of the rural farm segment is declining, the total rural population is expected to remain above 50 million for some time. Thus the nonfarm component of the rural population will rise, and the rural component as a proportion of the total population will decline, possibly from the 1960 proportion of 30 percent to a 1980 figure of 20 percent. In discussing the implications of these changes, one author has pointed out

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[4] The figures are: from 5.4 million, or 8.1 percent of total 1960 employment, to 3.9 million, or 4.5 percent in 1975, or a decline of 28 percent in the 15-year period (*12, pp. 89, 244*).

TABLE 9.—*Expenditures, income, and savings by age of family head, urban, rural nonfarm, and farm families and single consumers*

Item	Urban (1960)			Rural nonfarm (1961)			Farm (1961)		
		Families with head aged—			Families with head aged—			Families with head aged—	
	All families	65 to 74	75 and over	All families	65 to 74	75 and over	All families	65 to 74	75 and over
Family characteristics:									
Average family size ... persons	3.1	1.8	1.7	3.5	1.9	1.8	3.8	2.5	2.2
Net change in assets and liabilities ... dollars	152	130	−42	176	45	81	519	356	−6
Average number of full-time earners ... persons	.8	.3	.2	.7	.2	.1	1.1	1.1	.9
Average age of head ... years	47	69	80	50	69	80	51	69	79
Education of head ... years of school	10	8	8	9	8	7	9	8	6
Homeowners, all year ... percent	52	58	59	67	78	75	71	84	85
Auto owners, end of year ... do	72	47	28	82	63	42	91	87	61
Income, expenditure, and savings:									
Total receipts ... dollars	7,646	4,781	3,937	6,414	3,986	2,972	6,665	4,963	3,280
Money income after taxes ... do	5,829	3,903	3,013	4,700	2,846	2,003	4,424	3,390	2,455
Other money receipts ... do	73	32	42	76	21	108	98	72	17
Decrease in assets ... do	876	734	828	831	1,030	822	1,896	1,421	770
Increase in liabilities ... do	868	112	54	807	89	39	247	80	38
Accounts balancing difference ... do	−244	−63	−82	−158	−14	57	−10	106	51
Total disbursements ... do	7,890	4,844	4,019	6,572	4,000	2,915	6,675	4,857	3,229
Increase in assets ... do	1,366	799	728	1,334	1,008	891	2,468	1,759	772
Decrease in liabilities ... do	530	177	112	480	156	50	193	100	30
Personal insurance ... do	324	144	70	241	81	36	200	111	54
Gifts and contributions ... do	302	316	272	221	249	117	220	239	257
Expenditures for current consumption ... do	5,368	3,408	2,837	4,296	2,506	1,821	3,594	2,648	2,116
Percent distribution:									
Expenditures for current consumption ... percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Food, total ... do	24.4	26.8	26.9	25.2	25.4	30.3	24.1	23.6	24.9
Tobacco ... do	1.8	1.5	.9	2.0	1.6	1.4	1.8	1.7	1.5
Alcoholic beverages ... do	1.8	1.5	.8	1.2	1.0	1.2	.8	.6	.3
Housing, total ... do	29.5	32.1	36.4	27.7	31.7	32.8	25.5	27.2	31.2
Fuel, light, refrigeration, and water ... do	4.5	5.7	6.7	6.4	9.6	11.4	6.4	8.0	9.6
Household operations ... do	6.0	6.8	8.6	5.2	5.9	5.8	4.3	4.7	6.4
Housefurnishings and equipment ... do	5.2	3.4	3.0	5.6	5.1	4.8	6.1	6.0	5.4
Clothing, clothing materials, services ... do	10.2	8.0	6.7	9.5	6.7	5.0	11.9	8.1	7.0
Personal care ... do	2.8	2.9	2.7	2.9	2.6	2.5	2.9	2.7	2.3
Medical care ... do	6.4	9.1	10.9	6.9	10.4	11.4	8.6	10.8	15.1
Recreation ... do	4.0	2.7	2.1	3.8	2.8	1.9	3.4	2.6	1.8
Reading ... do	.9	1.1	1.2	.8	1.0	1.0	.7	.8	.9
Education ... do	1.1	.6	.3	.8	.2	.0	1.1	.2	.4
Transportation ... do	14.7	11.4	8.1	17.1	13.8	9.4	17.1	18.7	10.6
Other expenditures ... do	2.2	2.4	2.9	2.1	2.8	3.1	2.1	2.9	3.9

Source: Bureau of Labor Statistics, *Consumer Expenditures and Income, Urban United States 1960–61*, table 3–B, and *Rural Nonfarm Areas in the United States, 1961*, table 3; USDA Consumer Expenditure Survey, Report No. 5, *Consumer Expenditures and Income: Rural Farm population, United States, 1961*, table 3.

that the occupation and industry attachments of rural nonfarm workers have traditionally been more like those of the urban than those of the farm population. With the technological advances in agriculture in recent years and the decline in farm employment, as well as the decrease in importance of industries which have traditionally employed rural persons (mining, for example), the occupational distinctions between urban and rural workers are dimming. Adjustments still need to be made, however, involving "half or more of the farms and the people on those farms with units that are too small to provide a minimum adequate living from agriculture" (*3, p. 24*)

Viewed in the occupational context, the adjustment can properly be considered as one requiring movement away from small or unproductive farms. When the particular position of the aged farmer is under consideration, however, this movement is complicated by factors such as the reduced mobility associated with age, the lower education and skill levels of older persons and their scant job opportunities elsewhere, and by strong attachments to the place of residence because of homeownership.

Earnings and Retirement Benefits

Agriculture's decline in importance has been of special significance to the aged because, in the past, few restrictions have been placed on the older man's continuance in a farm job. In other industrial sectors, the opportunity to continue working past the usual retirement age has come to be more and more limited since the Second World War. It is clear, therefore, that the trend toward fewer (and larger, more efficiently run) farms has reduced one source of employment for older men; farming cannot be expected to assume any great importance in older men's future job prospects.

But neither, apparently, can any other sector of the economy. The movement toward compulsory retirement and in the recent past, particularly, toward early retirement, has been an outgrowth of economywide unemployment. In an effort to find jobs for middle-aged and younger men, who typically have greater family obligations than men aged 65 and over, the job needs of older men have understandably received little attention. The slightly more than one-in-four labor force participation rate for older men (as compared with two-in-three at the beginning of the century) thus reflects in part a shift out of agriculture. But in the past two decades it reflects also strong efforts to reduce the number of job seekers. All the evidence points toward a continued emphasis on early retirement.

To the extent that this movement prevails, the income position of the rural and urban elderly will come to depend even more on public and private pensions and much less on earned income. For future consideration, an important distinction must therefore be made between those who approach retirement with full social security benefits and some supplement in the form of a private pension or annuity, and those whose employment records do not entitle them to full benefits, and who have no private pension or other claims. If earnings are to provide a declining proportion of the aged's income, differences between retirement incomes of the rural farm, the rural nonfarm, and the urban elderly will be reduced or increased, depending on several factors.

Since the retiree's benefit is to some extent wage related, and since the earnings records of rural workers tend to be lower than those of urban workers, the rural worker less frequently qualifies for the maximum benefit. Moreover, his lower earnings will probably mean that he has at retirement accumulated less in savings and insurance. It is difficult to generalize as to the relative significance of private pension funds for the urban and rural nonfarm retirees, except again to say that private pension claims are correlated directly with job stability and earnings during working life. There is of course no opportunity for the older farm group to gain such coverage as farmers, though there may be some cases in which an earlier industrial job has given the farmer a private pension claim. The number of workers qualifying for private pensions is still a small proportion of the total;[5] this source of income, particularly for the lower income workers, should therefore not be exaggerated.

The more significant social security benefits become as a proportion of the total income of the aged, the smaller will be the income differential between the rural and the urban aged, although the differential will not disappear as long as earnings records affect benefits, and the earnings of urban workers remain higher. The same narrowing of differentials occurs in the case of benefits to the aged white person and the aged Negro (*9, pp. 3–13*). In the long run, therefore, the problem is likely to be one of insuring that the program of income maintenance for all the aged is substantially improved. This overall goal does not of course preclude special attempts to raise the incomes of the poorest among the aged.

The very poor aged can be identified by any one of several characteristics. Extremely low money incomes typically accrue to the very old among the aged, who are not able to work and who are not covered by social security benefits. Unfortunately, low incomes also prevail among the younger aged (those aged 62 to 64). As table 10 reveals, the median incomes of beneficiary couples in the younger group (aged 62 to 64) and in the older (aged

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According to a recent estimate made by the National Bureau for Economic Research, approximately 25 to 30 percent of the older persons will be receiving private pensions by 1979 (*8, pp. 16–20*).

73 and over) are approximately the same. For nonmarried men, too, the incomes of the two age groups are comparable. The low incomes of the male beneficiaries aged 62 to 64 reflect their failure to find jobs, and their willingness to accept a reduced benefit; for the very old beneficiaries, these low incomes are due to reduced earning capacities. In the case of the nonbeneficiaries, incomes are higher for the younger couples and single persons, since their earnings are generally higher.[6]

TABLE 10.—*Median income by age and beneficiary status, units aged 62 and over, 1962*

Age	Married couples[1]		Nonmarried men		Nonmarried women		
					OASDI beneficiaries		
	OASDI beneficiaries	Non-beneficiaries	OASDI beneficiaries	Non-beneficiaries	Retired[2]	Widowed	Non-beneficiaries
62 to 64 years	$2,470	$5,900	$1,265	$2,685	$1,220	$1,350	$2,205
65 to 72 years	2,900	4,750	1,610	2,000	1,455	1,285	855
73 years and over	2,430	1,680	1,260	860	1,120	960	720

Source: Lenore A. Epstein, "Income of the Aged in 1962," *Social Security Bul.*, March 1964, p. 17.

[1] With at least 1 member aged 62 or over.

[2] Retired women receive benefits based on their own wage record.

Low incomes accrue to older unattached individuals, who are often widows receiving some small OASDHI benefit plus a welfare payment, or who are living altogether on welfare funds. The aged nonwhite family or individual has a much lower income than the white family or single person; the family headed by an aged woman has a lower income than the family headed by an aged man. Finally, as the data presented earlier demonstrate, the rural aged have lower money incomes than the urban aged. Table 11 indicates the 1959 median incomes for aged families classified as to color, sex of family head, and place of residence; table 12 shows similar data for aged single persons.

TABLE 11.—*Families with heads 65 and older, of specified residence, color, and type, ranked by number of families and by size of income, 1959*

Residence, color, and type of family	Ranking		Number	Median income	Percent with income of less than—	
	By number of families	By size of income			$2,000	$3,000
			Thousands	*Dollars*	*Percent*	*Percent*
Urban-white —husband-wife	1	3	2,938	3,782	23.6	40.4
Rural-white —husband-wife	2	6	1,505	2,344	43.6	62.2
Urban-white —female head	3	2	625	4,196	24.6	36.6
Rural-white —female head	4	8	218	2,330	45.5	58.9
Urban-white —other male head	5	1	213	5,187	17.5	28.3
Urban-nonwhite—husband-wife	6	7	209	2,338	44.0	61.5
Rural-nonwhite —husband-wife	7	11	126	1,360	73.4	85.5
Rural-white —other male head	8	4	109	2,753	38.6	53.7
Urban-nonwhite—female head	9	9	82	1,923	52.0	67.1
Rural-nonwhite —female head	10	12	41	1,091	76.0	87.2
Urban-nonwhite—other male head	11	5	23	2,718	38.2	54.6
Rural-nonwhite —other male head	12	10	15	1,502	65.7	71.9

Source: Prepared by the Office of Aging, Department of Health, Education and Welfare, from tabulations of the 1960 Census of Population.

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[6] For a fuller explanation of age differences in income, see (*4, pp. 16–22*).

Table 12.— *Unrelated individuals 65 and older, of specified residence, color, and sex, ranked by number and by size of income, 1959*

Residence, color, and sex	Ranking: By number of persons	Ranking: By size of income	Number	Median income	Percent with income of less than—: $1,000	Percent with income of less than—: $2,000
			Thousands	*Dollars*	*Percent*	*Percent*
Urban-white —female	1	2	1,858	1,043	48.8	76.6
Urban-white —male	2	1	752	1,558	31.3	64.8
Rural-white —female	3	5	526	738	67.7	87.9
Rural-white —male	4	3	308	992	50.4	79.1
Urban-nonwhite—female	5	6	140	695	71.9	92.7
Urban-nonwhite—male	6	4	101	958	52.2	80.6
Rural-nonwhite —female	7	8	40	548	91.3	98.4
Rural-nonwhite —male	8	7	33	651	76.9	93.5

Source: Prepared by the Office of Aging, Department of Health, Education and Welfare, from tabulations of the 1960 Census of Population.

Summary and Conclusions

In analyzing the economic position of the rural elderly, the following criteria have been taken into account: Their money incomes; the relation of these incomes to need (as might be measured by the poverty index used by the Social Security Administration); the extent of homeownership and the holding of liquid assets; consumption levels, including the availability of adequate housing and standard household appliances. In summary, the data show that:

(1) The 1965 median income for families headed by persons aged 65 and over was $3,460, or 47 percent of the median for families headed by persons aged 14 to 64.

(2) The median for aged persons living alone or with nonrelatives was $1,348, which was 40 percent of the median for younger single persons.

(3) Among the rural elderly, almost two out of three families received less than $3,000 income as of the 1960 census.

(4) On the basis of the poverty index that considers varying needs as well as money incomes, almost 5.3 million, or 30 percent, of the noninstitutionalized aged are now living in poverty; this is approximately twice the proportion of the young who are below the poverty line.

(5) The median income for aged couples living in central cities (as well as that for aged suburban couples) is about $1,000—or at least 40 percent—higher than that for aged couples living outside metropolitan areas; the differences for aged individuals are comparably wide.

(6) Homeownership is most frequent among those in the suburbs and outside metropolitan areas; median value of all assets other than the home is low, varying from $3,360 for the suburban couple to $2,495 for the nonmetropolitan couple, and from $1,665 for suburban single men to $525 for men living outside metropolitan areas.

(7) Older rural families less frequently have homes in sound condition and adequately equipped with telephone, hot and cold water, and appliances, than urban older families.

(8) Consumption levels of the rural aged reflect their low income levels and the small amount of discretionary income available; the poorest rural groups (the very old) spend about two-thirds of their total budget on food and shelter.

The money income position of the rural aged as a group will be somewhat improved (or at least less disadvantaged relative to the urban aged) as the lower income farm component gradually diminishes in size. The fate of the rural nonfarm elderly is dependent on the same set of forces that dictate the future welfare of the urban aged, that is, the extent of improvement in public and private pensions. It is unrealistic to expect significant improvements in earnings for those elderly persons who are the poorest—the oldest of the retired group—since their capacities for work are limited, even if jobs were available. It seems very likely, therefore, that in general the retirement incomes of the two groups will move closer together, just as occupational patterns have merged.

Job opportunities for those persons below retirement age continue to be the most significant single factor determining retirement income. Given a stable employment record with sufficient earnings to insure a maximum OASDHI benefit, the retiree can usually acquire some savings and other assets as well. By contrast, the family head who cannot find employment during his late fifties and early sixties is prone to take an early retirement at a reduced benefit. The combined disadvantages of a lowered monthly benefit which must now support him for a longer period, plus the inability to save for retirement or qualify for a private pension, conspire against an adequate income in old age. Insofar as employment opportunities are better in urban than in rural areas, incomes of the rural retirees will continue to mirror this disadvantage, just as the earnings of the younger rural population will reflect their relatively disadvantaged position.

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Chapter 4

Some Characteristics of Villages in Rural America

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Introduction

Despite continuing urbanization, villages are still an important part of the rural settlement fabric. They are scattered over the length and breadth of the nation, constituting a large majority of its population centers. The 1960 census reported 9.5 million people living in incorporated places under 2,500 in size, representing over 5 percent of the total. This population is greater than that of any State except the largest five. Perhaps an equal number of people live in small unincorporated centers.

Furthermore, many of these places are growing. Between 1950 and 1960 incorporated centers under 2,500 in 1950 located in nonmetropolitan areas grew about 8 percent as a whole. This compares favorably with the 7 percent increase of the total nonmetropolitan population. Aggregate growth at this slow rate, however, points to a net loss of migrants, and some individual villages are experiencing large absolute declines just as others are increasing rapidly.

There is general agreement, however, that most of these places are experiencing important changes and adjustments in the face of population, economic, and technological trends. For example, the trade and service functions of the village are affected by trends in agriculture and other extractive industries as fewer people but more services, supplies, and equipment are required to carry out these functions. Rapid transportation and communication have led to changes in trade patterns, often to the benefit of larger centers, but also making possible long distance commuting, expansion of the resort and recreation activities in some rural areas, and even some decentralization of industry (*13, 19, 23, 25*).[1] In this process of change, some places, particularly small remote centers, may be hurt badly, but others may prosper in their new roles. Regarding the individual resident, Nesmith (*23, p. 179*) comments on adjustment and change in the small rural town:

> We hear a great deal about the dramatic and drastic social changes faced by people who migrate to cities from the country. It may be, however, that the social and economic adjustments that will be required by those unable to compete successfully in the rural regions will be no less drastic and upsetting if they stay than if they go.

These are indications that the village will continue to demand the attention of social scientists and persons concerned with rural welfare. It has not "already disappeared," if indeed it ever will. The position of the village today, as well as its local setting, needs to be understood better in terms of other rural and urban population components and the causes and consequences of changes in the village need to be assessed.

This study is a comparative analysis of population and housing characteristics of villages in the United States as of 1960. There has been little previous research in which the characteristics of a number of villages were considered and compared. Except for the work by Duncan and Reiss for 1950 (*9*), no comprehensive nationwide study has reported on the characteristics of small villages, and none has considered housing data. One reason for this neglect has been the lack of available data. Censuses of the United States have been limited both in the coverage of places considered villages, and in the scope of data reported. Unincorporated places under 1,000 are not reported by the census.[2] A special report in connection with the 1950 census gave aggregate characteristics of incorporated villages compared with other sized places (*31*), and was the basis for the Duncan and Reiss work cited above. Other recent census reports include only limited characteristic data for incorporated villages of 1,000 to 2,500, and simply give population size for smaller places.[3]

Villages for the purpose of this study include all incorporated places under 2,500 located outside Standard Metropolitan Statistical Areas (SMSA's). There is not wide consensus on a definition of the villages. Some researchers have developed elaborate typologies based on size, whereas others stress differences in function. Statements about villages have often assumed that they all have a particular function (for example, as agricultural trade centers) or that they are found in a particular location (usually remote from larger centers).

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

[2] Trends in larger unincorporated centers 1950–60 are reported by Fuguitt (*14*). Landis (*18*) and later Duncan and Reiss (*9*) have estimated the total number of unincorporated places in the country for 1930 and 1950.

[3] Smith (*27*) studied the 1930 characteristics data for places of 1,000 to 2,500. In seven States where small incorporated villages are minor civil divisions it is possible to obtain more detailed census tabulations on characteristics without the size limitation. Some of these have been analyzed by Belcher (*3*), Duncan (*8*), and Field (*10*). Two early sources (*11, 21*) give special tabulations of 1920 and 1930 census data for 155 selected U.S. villages. Fry (*12*) and Jenkins (*17*) did further work with these data.

The definition used here includes both aspects that are most pervasive in the literature—size and rural location. Most writers agree that whatever else a village is, it is small. Here the 2,500 level is used, since this is where the census makes the distinction between rural and urban places. Also, most discussion and research on villages have been concerned with them as a rural settlement type. By limiting consideration to nonmetropolitan areas I have excluded any place adjacent to a very large city. Some are no doubt in the range of direct urban influence through such factors as retail trade and commuting, however, particularly among those in counties bordering metropolitan areas, or others located close to nonmetropolitan cities.

The limitation to incorporated places in the village definition was dictated by the available data. These places probably include less than one-half of the population nodes one might identify as villages, but the census does not report unincorporated places under 1,000 in size, as previously noted.

The Data Employed

Characteristics data were not reported for smaller places in the 1960 census so it was necessary to turn to a sampling procedure. I drew a stratified random sample of 570 villages, or 5 percent of the 11,295 incorporated centers of less than 2,500 people in 1960 which were located outside of Standard Metropolitan Statistical Areas. The strata used were: (a) census division (nine groups of States); (b) size (more or less than 500 in 1960); (c) location (whether or not in a county within 50 miles of an SMSA central city); and (d) growth (increased or decreased in size between 1950 and 1960, or incorporated since 1950). Places were simultaneously cross-classified according to these attributes, and random selections were made with the number selected proportional to the size of each stratum.

Next I purchased from the Bureau of the Census photocopies of table PH-1 for each enumeration district included in each sample village. Enumeration district boundaries coincide with village boundaries, and in this way it was possible to obtain the complete-count population and housing data for a sample of U.S. villages. Complete-count population data include age, sex, race, marital status, and household composition; housing data include tenure, race of occupants and vacancy status of housing, condition of plumbing, number of rooms, number of persons, and persons per room. Since many tabulations are given for nonwhites, analysis was done separately for whites and nonwhites in the South.

These data were aggregated for all villages and for appropriate groupings of villages. In making comparisons, statistical tests of significance were not carried out. Given the nature of the study a very large number of such tests would be required, and because this is a cluster sample for individuals or households, conventional tests are inappropriate. Sample sizes are all quite large, as is seen in the appendix, table 21, so only small differences should fail to be significant. Such small differences should be interpreted with caution, particularly if they are not consistent with an overall pattern of comparisons.

The Plan of Analysis

There are two major aspects of the analysis. First, characteristics of all U.S. villages considered together have been compared with those of other appropriate population units. These other units include the total United States, the total nonmetropolitan population, and the nonmetropolitan rural and urban segments. Since in many ways the nonmetropolitan village, as the smallest sized place in a more rural setting, stands between rural and urban forms of settlement, it is meaningful to compare these segments.[4]

The second part of the analysis involves the comparison of different groupings of villages. Here an important variable is location. On a national scale, different parts of the country have different economic resources and activities and rural settlement patterns, all of which may well be reflected in village characteristic differentials. For this reason villages in three different regions of the country are compared. Also, whether or not large cities are near may lead to differences in population structure. Those villages in the study located in counties part of which are within 50 miles of the central city of a Standard Metropolitan Statistical Area are contrasted with more remote places.

On a more localized scale, different areas may be contrasted in terms of a variety of economic and social indicators, an important set of which refer to socioeconomic status. Places in the sample have been classified according to whether or not they are located in counties reporting a median family income of less than $3,000 in 1960, and their characteristics compared.

Another very important basic characteristic used to differentiate villages in this research is growth or decline. A growing place, particularly one growing rapidly, will have a set of challenges quite different from a place that is declining. This is recognized, for example, by Larson and Lutz, who considered the adjustment of expanding, stable, and declining communities (*20*). The need to understand better these types of places makes it important to compare growing and declining villages in terms of their population and housing characteristics.[5] I compared places that grew during the 1950–60 decade with those that did not.

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[4] The total village population, from which the sample was drawn, cannot be excluded from the rural nonmetropolitan segment, and is 19 percent of this figure. Such a proportion should not greatly affect comparisons between the rural segment and the sample villages.

A Village Balance Sheet

Much literature on the village deals with growth and decline. Many writers have argued (some have simply assumed) that villages as a whole are dying.[6] Others have contested this, and recent census analysis, as already noted, shows that many villages are growing. As background for this study, table 1 was prepared to give a record of changes taking place in the nonmetropolitan villages of the United States over the 1950–60 period.[7] There was a slight gain in the number of small places over the decade, from 11,162 to 11,295. This is seen to be a net increase, with the newly incorporated places and places added through decline from over 2,500 (574 in all) outnumbering the 441 places growing out of the category or not reported in 1960. Note that the number of new incorporations is 4 times the number of dropouts, and the number of places growing out of the category is 10 times the number declining.

TABLE 1.—*Balance sheet for incorporated places under 2,500 population, nonmetropolitan United States, 1950–60*

Type of change	Number of places	Population 1950	Population 1960
Places in 1950	11,162	7,574,418	8,246,276
Change, 1950 to 1960:			
Gain:			
Decline from larger category	51	133,277	104,493
New places	523	.....	242,908
Loss:			
Growth to larger category	312	621,196	977,093
Dropouts	129	46,413	.....
Places in 1960	11,295	7,040,086	7,616,584

The population of places under 2,500 was only 1 percent larger in 1960 than in 1950, but the table shows that these are not all the same places. In contrast, the population figures in the first line of the table indicate that places under 2,500 in 1950 grew 8.9 percent. These two different results illustrate a methodological reason for some of the controversy over village growth trends. Growth of the village size class seems to be small here because rapidly growing places move up into larger size categories. If "success" is equated with growth, a growing village will succeed by becoming a small city.

Findings

The Village Compared With Other Population Segments

In this section the population and housing characteristics of sample villages are contrasted with those for other population segments, including the total United States, and the nonmetropolitan total, urban, and rural categories. The first characteristic considered, age of residents, is significant in several ways. First, many statuses of people in a community are in part determined by age, such as child, adult, employed person, retired person, or voting citizen, and the age structure sets limits on the number and proportion of individuals who may qualify for these statuses. An important example is the proportion of the population that can be employed, which influences the economic well-being of a community. Second, age structure is determined by fertility, mortality, and migration, so that by examining this structure, one may sometimes infer the effect of these demographic processes. Third, many other population and housing characteristics are influenced by age structure. Age differentials, then, need to be kept in mind in considering other differentials in characteristics.

Population characteristics

Figure 1 gives the percentage distribution by age of the sample villages considered together, along with the total United States and the total nonmetropolitan population for 1960. In this comparison, villages have a deficiency of children in the first two age groups, a deficiency in the working years between 20 and 50, and a marked surplus in people over 60. The nonmetropolitan population, which includes villages as a minor part of its total, has the highest proportion of young people, fewer in the working years, and a slightly higher proportion of older people in comparison with the United States as a whole.

Age structure of the villages and of nonmetropolitan urban and rural segments are given in figure 2. Again the villages are lowest in the proportion of children and people in working years up to 50, and have the highest proportion of older people. The rural nonmetropolitan category has the highest proportion of young people, and the urban nonmetropolitan category has the highest proportion of adults under 50 in this comparison. Also the urban category has a slightly higher proportion of older people than the rural category. The village segment here is not more similar either to the urban or to the rural segment in overall age structure. It is closer to urban in proportion of children and old people, but closer to rural in proportion of younger

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[5] There have been two previous comparisons of growing and declining villages (*10, 17*), and several dealing with larger centers (*9, 24, 36*).

[6] Hassinger (*16*) and Anderson (*1*) have reviews of the literature covering this topic. Other articles are included in the list of references.

[7] A more complete analysis has been reported (*15*).

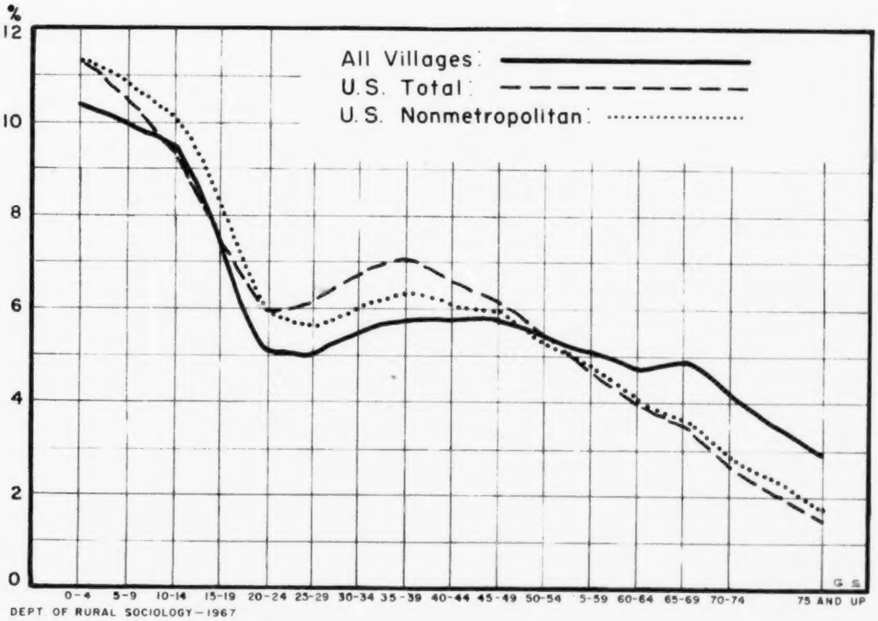

FIGURE 1.—Percentage distribution by age of sample villages, and United States total and nonmetropolitan categories.

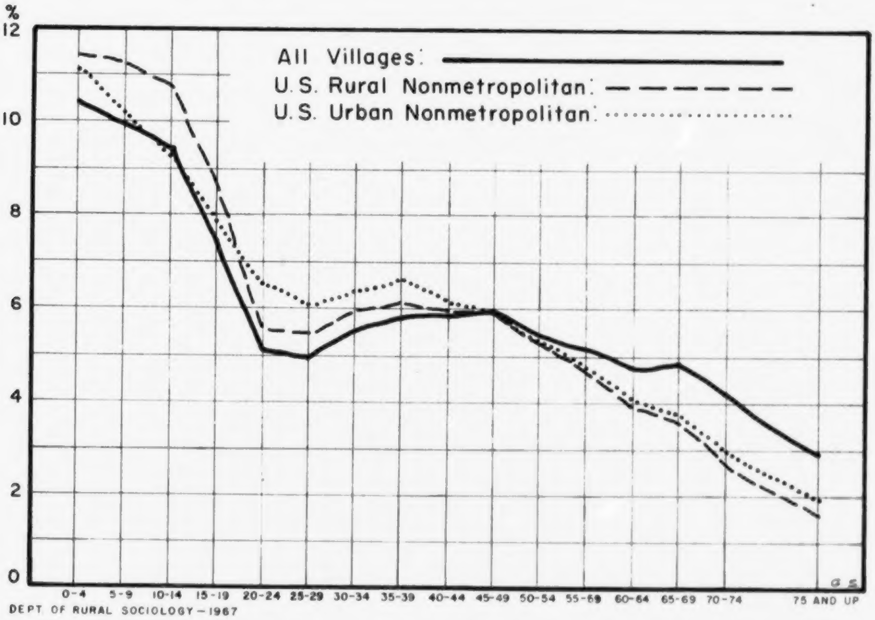

FIGURE 2.—Percentage distribution by age of sample villages, and United States nonmetropolitan rural and urban categories.

adults. See also the summary age distributions given in table 2.

The relationship between age structure and economic activity is often recognized in a crude way through the computation of dependency ratios. The number in younger or older dependent age groups (0 to 14, or 65 years and over) is divided by the intermediate age range (15 to 64) and multiplied by 100. Table 2 shows, for example, that in the sample villages there were 53 young people and 27 older people per 100 persons in the working years. This is a crude index, since many older persons work beyond 65; more and more young people are continuing their educations well beyond age 15; and the proportion of others, particularly women, in the labor force during the so-called working years is variable from place to place and time to time.

The youth dependency ratio for the sample villages, given in table 2, is only slightly larger than the national total and the urban nonmetropolitan categories, but lower than the total and rural nonmetropolitan categories. With the lowest proportion of people in the younger years, villages would have had the lowest youth dependency ratio of all except for a corresponding deficit in the working years. As expected, the aged dependency ratio for villages is more than 1½ times as large as that of any other segment.

Thus the village stands out as being at the extreme of the population groupings examined, particularly in surplus of older people and deficiency of adults. This fact has been noted for many years on the basis of earlier data. Smith listed one of the functions of the village as being "America's Old Folks' Home" (*28*), and many other writers have noted a tendency for farmers to move to an agricultural service center upon retirement (*22, 23*).

Unfortunately, it was not possible with the data at hand to determine the extent to which the high proportion of older people is due to migration into the community at this age, and to what extent it is due to migration of younger people out of the community. Both processes must be operating, and the more important outmigration of young adults is, the more likely the present age structure will show a marked population decline in the future, as people of advanced age die and are not replaced (*22, 33*).

A high degree of old-age dependency has important implications for small communities. This is exemplified by the problems of providing needed services for the population (particularly older people), with a relatively small number of active adults to furnish support through taxes and to provide leadership. In this situation it may be difficult to make the changes and adjustments necessary and to provide opportunities to attract and retain young people.

The balance between the sexes is the next population characteristic considered. This is measured by the sex ratio, or number of males per 100 females. The deficiency of men in the sample villages is closely similar to that for urban nonmetropolitan places, and the sex ratio is considerably below those for the other segments. Unfortunately, inaccuracies in age reporting make the analysis of sex ratios by age groupings of dubious value. Given the lower mortality rates enjoyed by women of all ages, and

TABLE 2.—*Population characteristics for the sample villages and selected U.S. population segments*

Characteristics	Sample villages	U.S. nonmetropolitan			U.S. total
		Total	Urban	Rural	
Age:					
Under 15 .... percent	30	32	31	33	31
15 to 64 .... do	55	58	59	57	60
65 and up .... do	15	10	10	10	9
Total .... do	100	100	100	100	100
Dependency ratios:					
Youth [1]	53	56	51	58	52
Aged [2]	27	17	17	17	15
Total	80	73	68	75	67
Sex:					
Males per 100 females	93.6	99.4	93.3	103.5	97.1
Race:					
White .... percent	93.1	89.0	90.3	88.2	88.6
Nonwhite .... do	6.9	11.0	9.7	11.8	11.4
Negro .... do	6.3	(3)	(3)	(3)	10.5
Other .... do	.6	(3)	(3)	(3)	.9
Fertility:					
Child-woman ratio [4]	499	513	479	537	488
Household composition:					
Population per household	3.07	3.39	3.17	3.55	3.29
Households with husband and wife present .... percent	71	77	72	80	74
Other relatives per household	1.32	1.59	1.40	1.72	1.49
Children under 18 of head	1.00	(3)	(3)	(3)	1.12
Other relatives of head	.32	(3)	(3)	(3)	.37
Nonrelatives per household	.04	.04	.05	.03	.05

[1] Children under 15 per 100 persons 15 to 64 years old.

[2] Persons 65 and over per 100 persons 15 to 64 years old.

[3] Data not available.

[4] Children under 5 per 1,000 women 15 to 49 years old.

the general tendency for women to outnumber men during advancing years, the lower sex ratio for the villages should be due in part to the high proportion of older people there. In nonmetropolitan cities, on the other hand, a lower proportion in the age range for children, when males usually predominate, and a possible surplus of young women, may have the same effect on the total sex ratio.

Villages have a lower proportion of nonwhites than the other population segments compared in table 2 (7 percent of the total). As is true for the nation as a whole, about 90 percent of the village nonwhites are Negroes.

The availability of age distributions by sex makes it possible to compute child-woman (fertility) ratios, to get a crude indication of fertility differentials.[8] Table 2 shows that the village fertility ratio is between that of the urban and rural categories. It is above the national total but below the total nonmetropolitan category. The fact that the child-woman ratio is not the lowest of the set, even though figures 1 and 2 show the proportion under 15 to be lowest, indicates that the young age deficit is not due to a lower fertility rate but to the deficit of women of child-bearing years.

Differences in household composition between villages and other segments in table 2 appear to be related to variation in age structure. Thus the population per household, percent of husband-wife households, and relatives per household are lowest for the village segment. With a higher proportion of older people and a deficit in both the working and the younger years, there are evidently more persons living alone or with spouse only in the sample villages.

Housing characteristics

Selected variables based upon data from the Census of Housing were computed for the sample villages and other population segments and are given in table 3.[9] The sample villages are between nonmetropolitan urban and rural in percent of houses occupied, and also in the percent of houses vacant but not for sale or rent. Nonmetropolitan urban areas have a higher percent of housing units occupied than rural areas, and a lower percent vacant but not for rent or sale. Villages are high in the percent of occupied units occupied by the owner, being very close to the rural nonmetropolitan total. The urban nonmetropolitan segment is 7 percentage points lower in this measure. The proportion of housing units occupied by nonwhites is lowest for villages, consistent with the low percentage of the population that is nonwhite, as previously noted.

The number of persons occupying a housing unit tends to be smaller for the villages. The percent of housing units occupied by one person is highest and the percent occupied by five or more persons is lowest out of the segments compared. This parallels the smaller number of persons per household reported in the population census. Small household size does not correspond to a preponderance of small-sized houses, however. The data on size of housing units in table 3 show villages to have the highest proportion of houses with seven or more rooms of the population segments considered.

The room-person ratio is a commonly used measure of crowding in the analysis of housing statistics. The percentages given here are of occupied dwelling units with more than one person for each room of the house. This measure of crowding is highest in rural areas but the village figure is lowest, about the same as that for the urban nonmetropolitan segment. In the case of the villages a low room-person ratio may reflect a situation where many older person are living in housing units built to accommodate growing children now gone (*26, p. 105*).

Housing quality was measured using information on condition of house as reported by enumerators, and information on plumbing facilities. In the 1960 Census of Housing, housing units were classified by observation as "sound," "deteriorating," or "dilapidated." Details on plumbing included hot water, private toilet and bath, and houses listed as "all plumbing" had these conveniences. The measures of quality used are (1) percent of houses sound, and with all plumbing,[10] (2) percent of houses dilapidated; and (3) percent of these houses sound and deteriorating which have all plumbing. The first takes both condition and plumbing into account; the second, condition only; and the third, plumbing only. For all three indices, the sample villages fall below the nonmetropolitan urban and above the nonmetropolitan rural segments, and in

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[8] Among the shortcomings of this measure is the possible underenumeration of children under 5, and insensitivity to differences in the age distribution of women within the childbearing span. To get at the latter problem, substitute rates were computed using an indirect age-adjustment procedure. In the tables presented here the only important effect of this adjustment was on fertility ratios comparing villages in or out of counties with median income under $3,000. Most of the differences shown in the ratios for these two sets of villages (tables 8 and 10) appear to be due to differences in age distribution of women within the child-bearing span. For an account of the adjustment procedure, see Barclay (*2*).

[9] The published summary report of the Census of Housing (*32*) presents data separately by urban and rural and by metropolitan-nonmetropolitan residence. In order to obtain these measures for the nonmetropolitan urban and rural segments it was necessary first to get data for the metropolitan rural segment by adding across all SMSA's. These totals were then subtracted from those for the total rural to get the nonmetropolitan rural segment. Then they were subtracted from total SMSA to get urban SMSA figures, which were in turn subtracted from the urban segment to get the urban nonmetropolitan totals.

[10] This measure gives results which are closely identical to the percent of "standard" housing (i.e., sound or deteriorating but with all plumbing), an index used in much housing research. See discussion of the "standard" housing measure in Dewhurst and associates (*6, pp. 218–224*). Duncan and Hauser (*7, pp 53–78*) have considered reliability problems in classifying houses as to condition.

TABLE 3.—*Housing measures for the village sample and selected U.S. population segments*

Housing measure	Sample villages	U.S. nonmetropolitan Total	U.S. nonmetropolitan Urban	U.S. nonmetropolitan Rural	U.S. total
Tenure and occupancy:					
Percent housing units—					
Occupied	89	87	93	83	91
Vacant, for rent or sale	3	4	4	3	3
Other vacant	8	9	3	14	6
Total	100	100	100	100	100
Percent occupied units—					
Occupied by owner	71	67	63	70	62
Occupied by nonwhites	6	9	8	9	10
Occupied by one person	18	12	15	10	13
Occupied by 5 or more	19	25	21	27	23
With 1.01 + persons per room	10	14	11	16	12
Size and quality:					
Percent housing units—					
With 1 or 2 rooms	7	7	7	7	8
With 7 or more rooms	20	18	15	19	15
Sound, with all plumbing	62	61	74	53	74
Dilapidated	7	8	5	9	5
Percent of all nondilapidated units having all plumbing	78	75	89	66	86

fact are almost the same as the nonmetropolitan segment as a whole.

Discussion

In contrasting the sample villages with other population segments, this analysis has shown them to be considerably different in terms of some characteristics and intermediate between urban and rural on others. The most outstanding trait of the village is a relative excess of older people, along with a deficiency of adults and children. According to the Census of Population, villages have smaller households, with fewer relatives and children. This finding was paralleled in the housing data by a smaller number of persons per housing unit in villages, but houses there had more rooms and less evidence of crowded conditions than those of other segments. These findings on family and home seem consistent with the higher proportion of older people in the village, and might be altered if age could be controlled. Another variable in which the sample villages are the extreme category is race, with the lowest proportion of nonwhites, and of housing units occupied by nonwhites.

For most of the remaining variables, on the other hand, the villages fall between the urban and rural nonmetropolitan segments. These include the sex ratio (virtually identical to the urban) the child-woman ratio, percent of housing units occupied, and the measures of housing quality. Duncan and Reiss, in their analysis of 1950 data, found some unique village properties such as an older population, but emphasized their conclusion that villages were intermediate on many characteristics between urban and rural. They went beyond this, however, and using a size-of-place analysis concluded that villages were more like small cities than like the rural open country *(9, p. 110)*. Except for the fertility ratio, village values for the variables falling between the two residence categories in the present study are not notably nearer the urban one. One variable, in fact, percent occupied by owner, is almost identical to the rural segment. If small urban places instead of the total urban segment were distinguished and compared, however, and the rural segment could be separated from the village population, more evidence might be obtained to support this latter conclusion of Duncan and Reiss.

Groups of Villages Compared

Differences by regional location

The second section of this analysis is concerned with the differentiation of population and housing characteristics within the total village category. Obviously, the study of villages would not proceed far under the assumption that they are all alike; the aggregate figures presented in the last section must conceal wide variations. As I stated in the introduction, three basic dimensions of differentiation were considered in this research. The first of these is regional location. There are many useful ways to divide the United States into regional groupings. In order to simplify the exposition, a trichotomy was employed here, with sample villages distinguished according to their location in the States of the North (census Northeast and North Central regions combined), the census South region, and the census West region.[11]

These groupings are readily understood by the reader, and comparing three areas is less complicated than dealing with a larger number, but each region encompasses a great deal of variation in geographic, social, and economic factors. Future work should include a comparison of villages classified according to a greater number of more homogeneous regional groupings.

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[11] The West region includes Montana, Wyoming, Colorado, New Mexico, and States farther west; the North includes New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Missouri, Kansas, and States to the north; and the South includes all States south and east of these two regions.

The age distribution of sample villages in the three regions is given in figure 3. The North and the South regions are similar, with a somewhat greater concentration of older people in the North and of people 40 to 55 years old in the South. Villages in the West, in contrast, have a considerably higher proportion of young people and a lower proportion of older people. The percentages in the West in the 65-and-over categories, however, are slightly above that shown in figure 1 for the nonmetropolitan segment as a whole.

These differences among regions are also demonstrated by the condensed age distributions and dependency ratios in table 4. This table also shows that the sex ratio is highest in the West, where there is almost an equal number of males and females. The North and the South are both several points below this. Many regional comparisons have shown the West to have higher sex ratios than other regions, and this has sometimes been attributed to the "pioneer" character of the region.

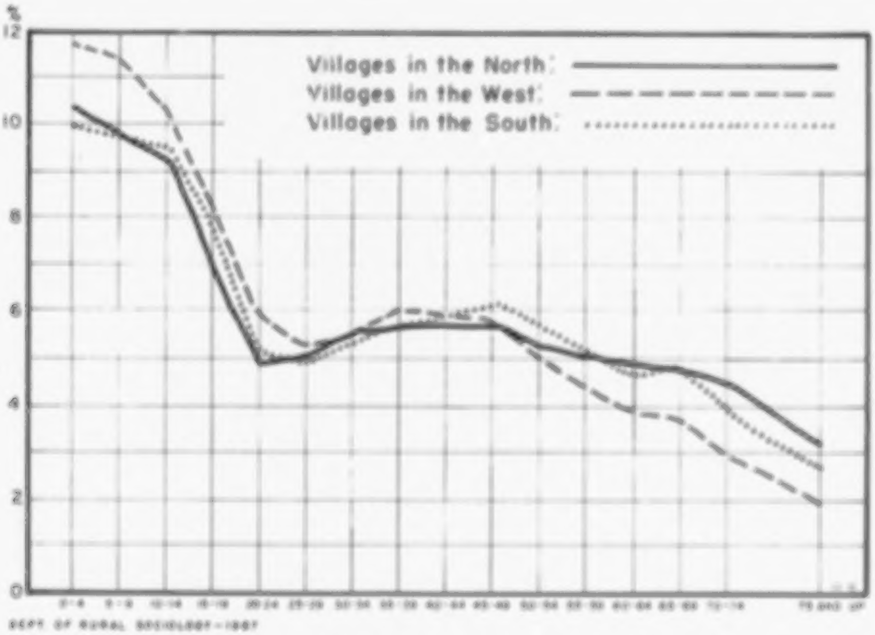

FIGURE 3.—Percentage distribution by age of sample villages in the North, South, and West.

Almost all the nonwhites in villages are Negroes living in the South, where approximately 20 percent of the village population is nonwhite. Though there is a high and increasing concentration of Negroes in the urban North, evidently very few live in nonmetropolitan villages there, with only about 1 percent of the population reported as nonwhite. Similarly, only 2 percent of the population in western villages is nonwhite. In villages of the South, 19 out of 20 nonwhites are Negroes, and in the North 9 out of 10 are Negroes. On the other hand, in villages of the West, less than 2 out of 10 nonwhites are Negroes.

As would be expected from the age distributions, the West has the highest fertility ratio, and the South has the lowest. Similarly, the West with its younger age structure has a larger population per household, more husband-wife households, and more children per household. The North, with an older age structure, has a lower population per household, but the South has the lowest percentage of husband-wife households, the highest ratio of other relatives per household, and the lowest ratio of children. An analysis in the next section will show the position of the South here is due to its nonwhite population.

The West has the lowest percentage of housing units occupied (table 5). Of those occupied it has the highest percentage with five or more persons, and of all units it has the highest percentage with one or two rooms, and the lowest percentage with seven or more rooms. Thus the room-person ratio

TABLE 4.—*Population characteristics for the sample villages classified by region of the United States*

Characteristic		Sample villages			
		U.S.	North	South	West
Age:					
Under 15	percent	30	29	29	33
15 to 64	do	55	55	57	56
65 and up	do	15	16	14	11
Total	do	100	100	100	100
Dependency ratios:					
Youth [1]		53	54	51	59
Aged [2]		27	29	25	19
Total		80	83	76	78
Sex:					
Males per 100 females		93.6	94.0	91.2	99.2
Race:					
White	percent	93.1	98.9	82.0	97.8
Nonwhite	do	6.9	1.1	18.0	2.2
Negro	do	6.3	.9	17.2	.3
Other	do	.6	.2	.8	1.9
Fertility:					
Child-woman ratio [3]		599	513	664	569
Household composition:					
Population per household		3.07	3.01	3.10	3.23
Households with husband and wife present	percent	71	71	69	74
Other relatives per household		1.32	1.26	1.37	1.45
Children under 18 of head		1.00	.99	.95	1.19
Other relatives of head		.32	.27	.42	.26
Nonrelatives per household		.04	.04	.04	.04

[1] Children under 15 per 100 persons 15 to 64 years old.
[2] Persons 65 and over per 100 persons 15 to 64 years old.
[3] Children under 5 per 1,000 women 15 to 49 years old.

is highest in the West for the sample villages, and previous research has shown this to be true of the general population (*35, pp. 7–10*). This measure of crowding is lowest in villages of the North, where fully 25 percent of the housing units have seven or more rooms.

The West and North regions are about the same on two measures of housing quality but the West is 10 percentage points above the North in the percent of houses with all plumbing. In all measures of quality the South ranks lowest. It also has the lowest percentage occupied by owners and the highest percentage occupied by nonwhites. The next section, which treats whites and nonwhites separately for the South, will help to elaborate some of these regional differences.

TABLE 5.—*Housing characteristics for the sample villages classified by region of the United States*

Characteristic	Sample villages			
	U.S.	North	South	West
Tenure and occupancy:				
Percent housing units—				
Occupied	89	90	90	83
Vacant, for rent or sale	3	3	3	6
Other vacant	8	7	7	11
Total	100	100	100	100
Percent occupied units—				
Occupied by owner	71	75	65	68
Occupied by nonwhites	6	1	15	0.3
Occupied by one person	18	18	17	17
Occupied by 5 or more	19	19	19	25
With 1.01 + persons per room	10	6	13	14
Size and quality:				
Percent housing units—				
With 1 or 2 rooms	7	5	8	13
With 7 or more rooms	20	25	14	12
Sound, with all plumbing	62	65	58	67
Dilapidated	7	5	10	7
Percent of all nondilapidated units having all plumbing	78	79	72	89

CHARACTERISTICS BY RACE FOR THE SOUTH.—Whites and nonwhites generally differ in their population characteristics, and I attempted to determine the extent of these differences for villages. Fortunately, the PH-1 tables give data separately by race. Since most nonwhites are concentrated in the South, such a comparison is most appropriately made within the southern region. In addition to revealing the level of white-nonwhite differences, this analysis will show to what extent differences between the South and other regions, as described in the preceding section, are due to the concentration of nonwhites in the South.

Figure 4 gives the age distributions of the white and nonwhite village populations along with the white and nonwhite nonmetropolitan total segments. Both nonwhite population segments are distinguished from the white segments by having a much higher proportion of young people and a lower proportion of persons of working years. The village nonwhite percent is generally below the nonmetropolitan nonwhite until age 55 and is above thereafter. Similarly, the village white category is below the nonmetropolitan white until age 45, and above at more advanced ages. For the 65-and-over age groups the village white has the highest concentration, followed by the village nonwhite, the nonmetropolitan white, and the nonmetropolitan nonwhite in that order.

Tables 6 and 7 show the population and housing characteristics for the South white and nonwhite segments as well as available corresponding values for the total nonmetropolitan South. The summary age data and dependency ratios are consistent with those of figure 4. The sex ratio is lower for nonwhites than whites when the two village categories or the two total categories are compared. For each race considered separately, however, the village segment has the lower sex ratio. Nonwhite segments show higher fertility ratios than white segments, but although the white village segment is below the white nonmetropolitan, the nonwhite village segment is slightly above the nonwhite nonmetropolitan

Given the age and fertility differences, it is not surprising that nonwhites have higher numbers of persons per household and relatives per household. However, nonwhites also have a lower proportion of husband-wife families, which with the higher proportion of children suggests a greater prevalence of broken homes. Nonwhite differences in family organization also are indicated by the higher proportion of other relatives (besides wife and children of head) and nonrelatives in nonwhite as compared

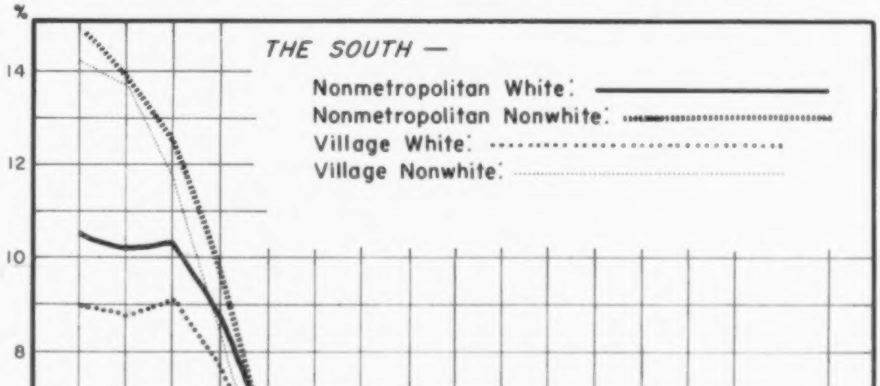

FIGURE 4.—Percentage distribution by age of white and nonwhite segments of sample villages and of the nonmetropolitan population in the South.

TABLE 6.—*Population characteristics by race for sample villages and the nonmetropolitan population of the South*

Characteristic	South, sample villages		South, nonmetropolitan	
	White	Nonwhite	White	Nonwhite
Age:				
Under 15 .... percent	27	39	31	41
15 to 64 .... do	58	49	60	51
65 and up .... do	15	12	9	8
Total .... do	100	100	100	100
Dependency ratios:				
Youth [1]	46	80	52	80
Aged [2]	25	23	16	15
Total	71	103	68	95
Sex:				
Males per 100 females	91.7	89.1	99.2	94.7
Fertility:				
Child-woman ratio [3]	414	713	459	700
Household composition:				
Population per household	2.99	3.69	3.39	4.27
Households with husband and wife present .... percent	72	52	79	63
Other relatives per household	1.23	2.08	1.57	2.56
Children under 18 of head	.88	1.28	(4)	(4)
Other relatives of head	.35	.80	(4)	(4)
Nonrelatives per household	.03	.09	.03	.08

[1] Children under 15 per 100 persons 15 to 64 years old.

[2] Persons 65 and over per 100 persons 15 to 64 years old.

[3] Children under 5 per 1,000 women 15 to 49 years old.

[4] Data not available.

TABLE 7.—*Housing characteristics by race for sample villages and the nonmetropolitan population of the South*

Characteristic	South, sample villages		South, nonmetropolitan	
	White	Nonwhite	White	Nonwhite
Tenure and occupancy:				
Percent occupied units—				
Occupied by owner	68	49	70	44
Occupied by one person	16	21	(1)	(1)
Occupied by 5 or more	17	31	(1)	(1)
With 1.01+ persons per room	10	30	15	37
Size and quality: [2]				
Percent housing units—				
With 1 or 2 rooms	7	15	(1)	(1)
With 7 or more rooms	15	4	(1)	(1)
Sound, with all plumbing	61	11	58	14
Dilapidated	7	30	(1)	(1)
Percent of all nondilapidated units having all plumbing	78	21	(1)	(1)

[1] Data not available.

[2] White figures in this section include all unoccupied units.

with white village households. For each race considered separately, the village segment has a lower number of persons per household, percent of husband-wife households, and number of relatives per household, than the corresponding nonmetropolitan segment.

The housing characteristics in table 7 show a number of large differences between the white and nonwhite categories. Nonwhites are considerably less likely to own their homes, although there is little difference between villages and nonmetropolitan totals in the level of home ownership for either race separately. Nonwhites are somewhat more likely to live alone and considerably more likely to live in housing units with five or more persons than are whites in southern villages. Also, they are more likely to have smaller housing units in terms of the number of rooms. The extent of crowding is thus greater for nonwhites, although comparable person-room ratios show that for each race taken separately, the level of crowding is higher in the nonmetropolitan areas taken as a whole than in villages of the South. In all three measures of housing quality, whites rank considerably above nonwhites. The one such measure with comparable data, however, indicates that there is little difference between the village and the total nonmetropolitan segment for each race.

This comparison has shown whites and nonwhites to be considerably different on many population characteristics, with nonwhites having a younger population, higher fertility ratio, fewer males, fewer husband-wife families, more crowding, and lower quality housing. Where separate white and nonwhite comparisons in characteristics could be made, however, differences between village and total nonmetropolitan segments generally were in the same direction for both racial groups.

The village data in tables 6 and 7 may be compared with that of tables 4 and 5 to see to what extent the position of the South in regional comparisons is influenced by its racial composition. In table 4 the South ranks lowest of the three regions in youth dependency and fertility ratio. Corresponding values for the white segment of the region (table 6) are also low, but the nonwhite segment ranks considerably higher than the villages in the North or the West. On the other hand, the South also ranks lowest in sex ratio; but although the white ratio is about the same as the total village figure, the nonwhite ratio is even lower than for the South as a whole.

Regional differences in household composition are modified considerably by making the white-nonwhite distinction in the South. In terms of population per household, the South ranked between the North and the West in table 4. The data in table 6 show, however, that the nonwhite South is above the West in this measure, while the white South is the same as the North. Similarly, the intermediate proportion of relatives per household for the South is an average between the nonwhites (with a higher proportion than either the North or the West) and the whites (with a lower proportion). The low percent of husband-wife households in the South is due to the nonwhite segment which has a very low percentage. The white percentage is almost identical with that for the North and the West.

Whites in the South have slightly fewer housing units occupied by one person or by five or more persons than do village residents of the North and the West, while nonwhites are higher than the North and the West on both percentages. The percent of households with more than one person per room is much higher for the nonwhite South than for the North and the West, and the white South is intermediate between the other two regions on this measure. The results for housing quality follow the same pattern. The South ranked below the other regions on all three measures because the nonwhite population segment is substantially below the North and the West, whereas the white segment is very close to them.

Differences by nearness to a metropolitan center

Another dimension of location is in terms of nearness to a large metropolitan center. Villages found in those counties at least partly within 50 miles of the central city of an SMSA are here contrasted with other villages. Table 8 shows only slight differences in population characteristics between these two groups. Fertility is somewhat lower near metropolitan centers, consistent with a number of earlier studies concerned with urban influences on rural areas. There is also a slightly larger number of persons per household near metropolitan centers because villages there have a higher proportion of children under 18 and other relatives of the head.

TABLE 8.—*Population characteristics of sample villages classified by nearness to a metropolitan center*

Characteristic		Near[1]	Far[2]
Age:			
Under 15	percent	30	30
15 to 64	do	56	55
65 and up	do	14	15
Total	do	100	100
Dependency ratios:			
Youth[3]		54	55
Aged[4]		25	27
Total		79	82
Sex:			
Males per 100 females		93.0	94.5
Race:			
White	percent	92.6	93.8
Nonwhite	do	7.4	6.2
Negro	do	7.1	5.2
Other	do	.3	1.0
Fertility:			
Child-woman ratio[5]		496	504
Household composition:			
Population per household		3.10	3.02
Households with husband and wife present	percent	71	70
Other relatives per household:			
Children under 18 of head		1.01	.98
Other relatives		.34	.30
Nonrelatives per household		.04	.04

[1] Place located in a county part of which is within 50 miles of an SMSA central city.

[2] Place located in a county not within 50 miles of an SMSA central city.

[3] Children under 15 per 100 persons 15 to 64 years old.

[4] Persons 65 and over per 100 persons 15 to 64 years old.

[5] Children under 5 per 1,000 women 15 to 49 years old.

The housing data (table 9) also show only slight differences by location. There are more houses occupied and fewer vacant but not for rent or sale in villages near central cities. Also, "near" villages have slightly fewer houses occupied by one person and slightly larger houses than "far" villages, but there is essentially no difference in crowding, ownership, or housing quality.

TABLE 9.—*Housing characteristics of sample villages classified by nearness to a metropolitan center*

Characteristic	Near [1]	Far [2]
Tenure and occupancy:		
Percent housing units—		
Occupied	91	87
Vacant, for rent or sale	3	3
Other vacant	6	10
Total	100	100
Percent occupied units—		
Occupied by owner	71	71
Occupied by nonwhites	6	5
Occupied by one person	17	19
Occupied by 5 or more	19	19
With 1.01+persons per room	10	11
Size and Quality:		
Percent housing units—		
With 1 or 2 rooms	6	9
With 7 or more rooms	21	17
Sound, with all plumbing	62	61
Dilapidated	7	7
Percent of all nondilapidated units having all plumbing	79	77

[1] Place located in a county part of which is within 50 miles of an SMSA central city.

[2] Place located in a county not within 50 miles of an SMSA central city.

This location variable is also considered for villages within regions and by race in the South. Table 10 shows that in the South, there is a slightly larger proportion of older people in villages away from metropolitan centers than in villages near such centers. The opposite relationship was reported by Stoeckel and Beegle for the rural farm population (*29*). Except for the white South segment, the finding of higher fertility away from large centers (table 8) is sustained in this table. Similarly, the smaller number of persons per household (specifically children under 18 and other relatives of head) away from metropolitan centers is found for all segments except the West.

The housing data in table 11 reveal generally small differences in location which are not always consistent between regions. For example, the percent of houses occupied by owner is higher away from metropolitan centers except in the North where the reverse is true. Percent of houses with 1.01 or more persons per room is higher away from metropolitan centers in the North and West, but lower away from metropolitan centers for each race category in the South. Measures showing persons per housing unit and rooms per house are consistent, however, with "far" villages being lower than "near" villages. Another consistent finding concerns the percent of houses not dilapidated which have all plumbing. This measure of quality is higher for villages near metropolitan centers regardless of race or residence. Previous studies have shown housing quality to decline with increasing distance from metropolitan centers (*4*).

TABLE 10.—*Population characteristics of sample villages classified by nearness to a metropolitan center and by region and race for the South*

Characteristic		North		South				West	
				White		Nonwhite			
		Near [1]	Far [2]	Near [1]	Far [2]	Near [1]	Far [2]	Near [1]	Far [2]
Age:									
Under 15	percent	29	29	27	26	40	39	33	34
15 to 64	do	55	54	59	57	50	47	56	56
65 and up	do	16	17	14	17	10	14	11	10
Total	do	100	100	100	100	100	100	100	100
Dependency ratios:									
Youth [3]		54	54	47	45	80	82	58	60
Aged [4]		28	31	24	29	21	29	20	18
Total		82	85	71	74	101	111	78	78
Sex:									
Males per 100 females		93.8	94.2	91.5	91.9	90.1	87.1	96.9	100.6
Fertility:									
Child-woman ratio [5]		511	517	422	396	711	718	522	551
Household composition:									
Population per household		3.05	2.98	3.04	2.90	3.76	3.54	3.21	3.24
Households with husband and wife present	percent	72	70	73	70	53	50	73	74
Other relatives per household:									
Children under 18 of head		1.01	.96	.92	.82	1.31	1.20	1.18	1.20
Other relatives of head		.29	.26	.36	.34	.83	.73	.25	.26
Nonrelatives per household		.04	.04	.03	.04	.09	.11	.05	.04

[1] Place located in a county part of which is within 50 miles of an SMSA central city.

[2] Place located in a county not within 50 miles of an SMSA central city.

[3] Children under 15 per 100 persons 15 to 64 years old.

[4] Persons 65 and over per 100 persons 15 to 64 years old.

[5] Children under 5 per 1,000 women 15 to 49 years old.

TABLE 11.—*Housing characteristics of sample villages classified by nearness to a metropolitan center and by region and race for the South*

Characteristic	North		South				West	
			White		Nonwhite			
	Near [1]	Far [2]	Near [1]	Far [2]	Near [1]	Far [2]	Near [1]	Far [2]
Tenure and occupancy:								
Percent housing units—								
Occupied	92	88	([3])	([3])	([3])	([3])	82	84
Vacant, for rent or sale	3	3	([3])	([3])	([3])	([3])	9	4
Other vacant	5	9	([3])	([3])	([3])	([3])	9	12
Total	100	100	([3])	([3])	([3])	([3])	100	100
Percent occupied units—								
Occupied by owner	76	73	67	71	48	52	66	69
Occupied by one person	14	19	16	18	20	23	17	17
Occupied by five or more	19	18	17	16	33	27	22	23
With 1.01 + persons per room	7	9	10	9	31	29	13	15
Size and quality:[4]								
Percent housing units—								
With 1 or 2 rooms	3	7	7	7	14	19	11	14
With 7 or more rooms	27	21	15	15	5	3	13	11
Sound, with all plumbing	68	62	61	61	11	10	65	67
Dilapidated	4	5	7	7	34	21	9	6
Percent of all nondilapidated units having all plumbing	8	76	79	77	24	16	92	87

[1] Place located in a county part of which is within 50 miles of an SMSA central city.

[2] Place located in a county not within 50 miles of an SMSA central city.

[3] Data not available.

[4] White figures in this section include all unoccupied units.

Differences by county income

In contrasting villages by area of location it is important to move beyond broad distinctions to more localized settings. Although many local area distinctions could be made, a basic dimension is socioeconomic status. In this study the local area is the county, and socioeconomic status was indexed by median family income. Thus, sample villages were classified according to whether the county in which they are located has a family median income above or below $3,000 in 1960. Note that this is a low cutting point for the dichotomy, since the median family income for the U.S. as a whole is $5,657. In fact, three-fourths of the population in the sample villages live in places located in counties with median incomes above this figure. This distinction was made to see if presence in a very low income situation makes a difference in the characteristics studied here. The $3,000 point is sometimes used to distinguish poverty families or poverty areas of the country.

The combined age distribution of villages located in low income counties is contrasted with villages located in other counties in figure 5. Those in low income counties have a lower proportion under 10, a higher proportion 10 to 20, a lower proportion 20 to 44, and a higher proportion for age groups 45 to 49 and over. Differences between places in low income counties and others are not very great, however. In fact, the condensed age distributions in table 12 are identical for the two types of villages.

The sex ratio for places in low income counties is lower than for those in other counties, as is the fertility ratio. The latter difference, however, seems to be due to a relative deficiency of women in the high fertility portion of the child-bearing span (20 to 35) in low income counties.[12]

Twenty percent of the population in villages of low income counties is nonwhite, in contrast to less than 5 percent for other villages. This is consistent with the well-known association of race with poverty. The lower percent of households with both husband and wife present, and the higher proportion of other relatives of head per household in villages of the low income counties as compared with other villages is consistent with a high nonwhite population. Despite the higher fertility ratio generally reported for nonwhites, however, fertility is not higher, nor is the population per household or the proportion of children per household, for villages in low income counties.

The housing data in table 13 show villages in low income counties have a lower proportion of housing units occupied by owner. There is no difference between the two types of villages in the number of persons in housing units, but houses in villages in low income counties are less likely to have seven or more rooms and the person-room ratio is slightly higher there. In all measures of housing quality, villages in low income counties are below villages in other locations.

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[12] See footnote 8.

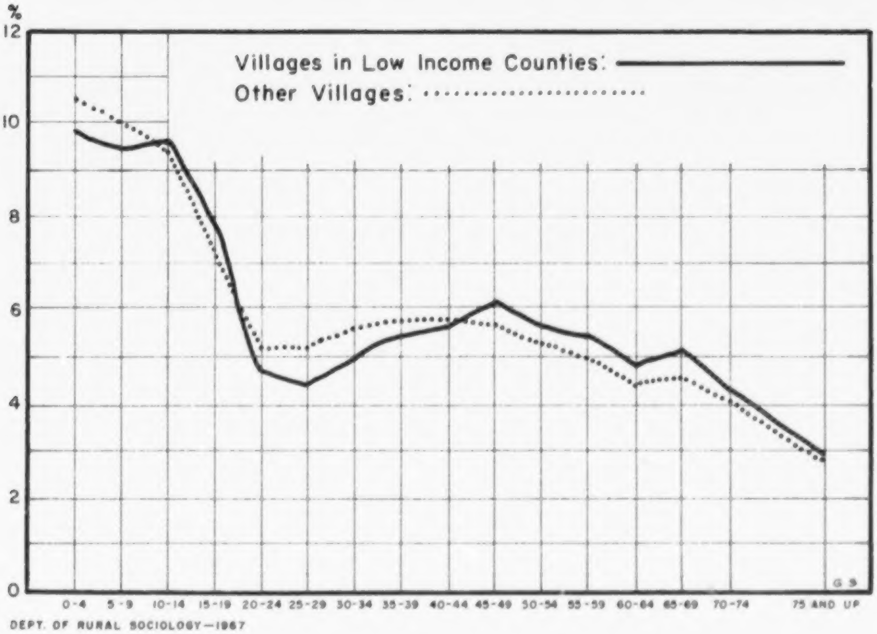

FIGURE 5.—Percentage distribution by age of sample villages classified by whether or not they are located in a county with median family income under $3,000.

TABLE 12.—*Population characteristics of sample villages classified by median family income of county, 1960*

Characteristic	Sample villages in county with median income	
	Under $3,000	$3,000 up
Age:		
Under 15 . . . . percent	29	30
15 to 64 . . . . do . .	56	56
65 and up . . . . do . .	15	15
Total . . . . do . .	100	100
Dependency ratios:		
Youth[1]	52	54
Aged[2]	28	26
Total	80	80
Sex:		
Males per 100 females	89.8	94.6
Race:		
White . . . . percent	80	96.1
Nonwhite . . . . do . .	20	3.9
Negro . . . . do . .	20	3.2
Other . . . . do . .	0	.7
Fertility:		
Child-woman ratio[3]	476	506
Household composition:		
Population per household	3.05	3.07
Households with husband and wife present . . . . percent	67	72
Other relatives per household:		
Children under 18 of head . . .	.92	1.01
Other relatives of head	.41	.30
Nonrelatives per household	.04	.04

[1] Children under 15 per 100 persons 15 to 64 years old.
[2] Persons 65 and over per 100 persons 15 to 64 years old.
[3] Children under 5 per 1,000 women 15 to 49 years old.

TABLE 13.—*Housing characteristics of sample villages classified by median family income of county, 1960*

Characteristic	In county with median income	
	Under $3,000	$3,000 up
Tenure and occupancy:		
Percent housing units—		
Occupied	91	89
Vacant, for rent or sale	3	3
Other vacant	6	8
Total	100	100
Percent occupied units—		
Occupied by owner	65	72
Occupied by nonwhites	16	3
Occupied by one person	18	18
Occupied by 5 or more	18	19
With 1.01 + persons per room	13	10
Size and quality:		
Percent housing units—		
With 1 or 2 rooms	8	7
With 7 or more rooms	14	21
Sound, with all plumbing . . .	52	64
Dilapidated	10	6
Percent of all nondilapidated units having all plumbing . . .	66	81

These results indicate the need for a more detailed comparison taking race into account. Regional difference may also have an effect, for although 80 percent of the population in low income villages is in the South and the other 20 percent in the North, only 22 percent of the population in other villages is in the South, 63 percent in the North, and 15 percent in the West. Tables 14 and 15 give population and housing data separately for the North and the South by race, with villages classified as before by county median income.

The general age differences found in figure 5 are reproduced for the North and the nonwhite South, with a deficiency of children and surplus of older people in villages of low income counties. There is no difference by county location, however, for the white South.

A similar pattern is observed for fertility and most household composition variables, with the difference found in table 12 repeated for the North

TABLE 14.—*Population characteristics of sample villages classified by 1960 median family income of the county and region, and by race for the South*

Characteristic	North		South			
			White		Nonwhite	
	Under $3,000	$3,000 up	Under $3,000	$3,000 up	Under $3,000	$3,000 up
Age:						
Under 15 . . . percent	26	29	27	27	39	40
15 to 64 . . . do	55	55	58	58	48	51
65 and up . . . do	19	16	15	15	13	9
Total . . . do	100	100	100	100	100	100
Dependency ratios:						
Youth [1]	47	54	46	46	82	78
Aged [2]	35	29	26	25	26	19
Total	82	83	72	71	108	97
Sex:						
Males per 100 females	92.1	94.1	90.6	92.5	84.8	96.7
Fertility:						
Child-woman ratio [3]	444	518	414	414	709	719
Household composition:						
Population per household	2.80	3.03	2.98	2.99	3.59	3.88
Households with husband and wife present . . . percent	67	71	71	72	50	56
Other relatives per household:						
Children under 18 of head	.82	1.00	.88	.89	1.22	1.38
Other relatives of head	.26	.28	.36	.35	.78	.83
Nonrelatives per household	.05	.04	.03	.03	.09	.11

[1] Children under 15 per 100 persons 15 to 64 years old.
[2] Persons 65 and over per 100 persons 15 to 64 years old.
[3] Children under 5 per 1,000 women 15 to 49 years old.

TABLE 15.—*Housing characteristics of sample villages classified by 1960 median family income of the county and region, and by race for the South*

Characteristic	North		South			
			White		Nonwhite	
	Under $3,000	$3,000 up	Under $3,000	$3,000 up	Under $3,000	$3,000 up
Tenure and occupancy:						
Percent housing units—						
Occupied	89	90	([1])	([1])	([1])	([1])
Vacant, for rent or sale	3	3	([1])	([1])	([1])	([1])
Other vacant	8	7	([1])	([1])	([1])	([1])
Total	100	100	......	......	......	......
Percent occupied units—						
Occupied by owner	71	75	68	68	46	54
Occupied by one person	21	18	16	16	21	20
Occupied by 5 or more	15	19	16	17	30	33
With 1.01+ persons per room	8	8	10	10	30	31
Size and quality:[2]						
Percent housing units—						
With 1 or 2 rooms	7	5	7	6	16	16
With 7 or more rooms	17	26	15	15	3	7
Sound, with all plumbing	58	66	59	63	9	14
Dilapidated	7	5	8	6	29	31
Percent of all nondilapidated units having all plumbing	67	80	75	82	17	29

[1] Data not available.
[2] White figures in this section inclu[illegible] all unoccupied units.

and the nonwhite South, but with no difference by county location observed for the white South. Other relatives of head per household is higher in low income counties according to table 12, and table 14 indicates this is due to the higher proportion of nonwhites there. Differences by type of county are small, and for two of the three segments this ratio is lower for low income counties. The ratios are twice as high for the nonwhite as for the white segments, however, regardless of county location.

The housing data in table 15 show a slightly lower level of home ownership in villages of low income counties for the North and the nonwhite South; a higher proportion of housing occupied by five or more, and a lower proportion of housing units with seven or more rooms. Again, there is no difference for the white South by county location. The higher room-person ratio found in table 13 for villages in low income counties appears to be due to the higher proportion of nonwhites there. In table 15 there is no evidence of greater crowding by county location for any of the three segments. The housing quality measures show that villages in low income counties rank below other villages regardless of race or region. The only comparison that is an exception is the percent of dilapidated housing for the white South.

My analysis has shown that for only two variables—other relatives per household and the room-person ratio—was the difference determined by village location due to the higher proportion of nonwhites in villages of low income counties. For the sex ratio and housing quality, the differences by type of county were sustained regardless of race or region. For other population and housing characteristics, however, the overall differences were found for the North (virtually all white) and for the nonwhite South, but not for the white South.

Differences by growth or decline

Characteristics of villages were first compared for different national regions by nearness to large cities and then on the basis of an attribute of the local area. The final set of contrasts considered in this research was made in terms of an important attribute of the village itself—its recent growth or decline experience. I again divided the sample villages into two groups. The first includes the 273 places reporting more population in 1960 than in 1950, plus the 28 places first appearing in the 1960 census. The second group consists of those 269 places that declined in population over the 1950–60 decade.

In figure 6 the age distributions of growing and declining villages are contrasted. Declining villages have a lower proportion at each age group under 40 and a higher proportion at each age group over 45. There is a particularly strong deficit in the twenties and also in the age group under 5 for declining places as compared with growing ones, and the largest surplus is in the age groups 65 and over. There is a close resemblance between this figure and the preceding one, with declining places similar to those located in low income counties. Differences by growth and decline are greater, however, than

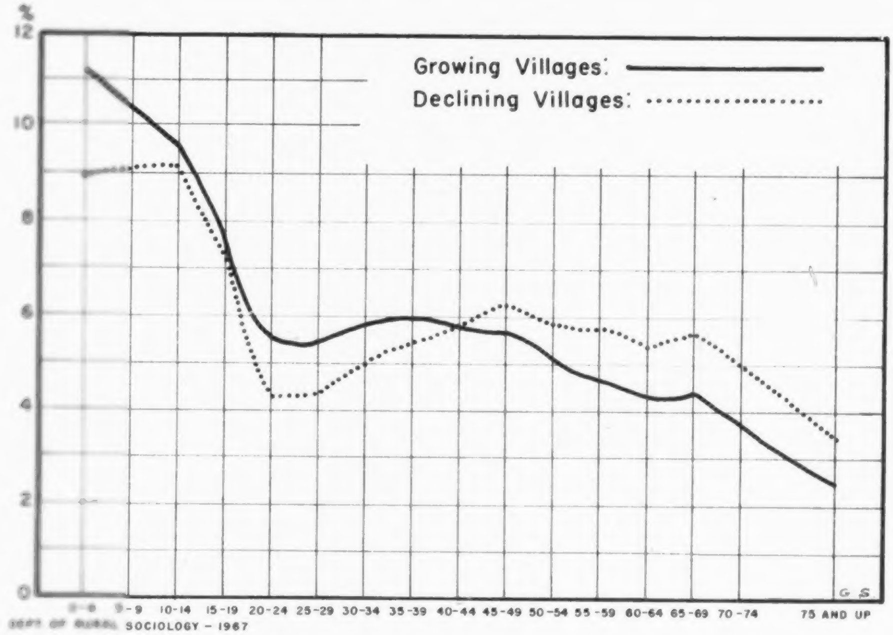

FIGURE 6.—Percentage distribution by age of growing and declining sample villages.

those by county income, and these are evident also in table 16. The youth dependency ratio is somewhat higher for growing villages and the aged dependency ratio is higher for declining places, according to this table.

TABLE 16.—*Population characteristics of sample villages classified by growth or decline, 1950–60*

Characteristic	Declining	Growing
Age:		
Under 15 . . . . percent	27	31
15 to 64 . . . . do . .	55	56
65 and up . . . . do . .	18	13
Total . . . . do . .	100	100
Dependency ratios:		
Youth [1]	49	56
Aged [2]	32	24
Total	81	80
Sex:		
Males per 100 females	92.4	94.3
Race:		
White . . . . percent	94.8	92.1
Nonwhite . . . . do . .	5.2	7.9
Negro . . . . do . .	4.5	7.4
Other . . . . do . .	.7	.5
Fertility:		
Child–woman ratio [3]	452	525
Household composition:		
Population per household	2.91	3.17
Households with husband and wife present . . . . percent	68	72
Other relatives per household:		
Children under 18 of head . . .	.87	1.07
Other relatives of head	.32	.32
Nonrelatives per household	.03	.05

[1] Children under 15 per 100 persons 15 to 64 years old.

[2] Persons 65 and over per 100 persons 15 to 64 years old.

[3] Children under 5 per 1,000 women 15 to 49 years old

The sex ratio and the fertility ratio are higher for growing places, as is the percentage of the population nonwhite. Growing places have a larger population per household, percent of husband-wife households, and proportion of children under 18 per household.

The housing data of table 17 show growing places to have a slightly higher rate of occupancy and corresponding lower proportion of houses vacant but not on the market. Declining villages have a higher percent of housing units with one person and a lower percent of housing units with five persons than is true of growing places. Measures of housing quality all favor the group of growing villages, despite the fact that growing villages have a higher proportion of nonwhites already shown to live in lower quality housing. There is little difference between growing and declining places in the other housing measures.

TABLE 17.—*Housing characteristics of sample villages classified by growth or decline, 1950–60*

Characteristic	Declining	Growing
Tenure and occupancy:		
Percent housing units—		
Occupied	88	91
Vacant, for rent or sale	3	3
Other vacant	9	6
Total	100	100
Percent occupied units—		
Occupied by owner	72	70
Occupied by nonwhites	4	7
Occupied by one person	20	16
Occupied by 5 or more	17	21
With 1.01 + persons per room	9	11
Size and quality:		
Percent housing units—		
With 1 or 2 rooms	6	7
With 7 or more rooms	19	20
Sound, with all plumbing	56	66
Dilapidated	8	6
Percent of all nondilapidated units having all plumbing . . .	75	81

Most of these findings are duplicated in tables 18 and 19 for the North, the South by race, and the West. An exception is the sex ratio for the nonwhite South and the West, the former showing no difference for declining places and the latter a slightly higher ratio. Also, for the nonwhite South, the percent of husband and wife households is higher and the percent of houses occupied by one person is 1 percent lower in declining than in growing places, in contrast to the other population segments and the sample villages as a whole. There is essentially no difference between growing and declining places in the number of rooms in housing units for all sample villages combined. For the North separately, however, there are more rooms in housing units of growing villages, but for the other three segments the reverse is true. Other data on age structure, fertility ratio, household composition, and housing utilization and quality are consistent for the four segments, showing the same differences between growing and declining villages as was found for all sample villages considered together. Data on housing vacancies could not be analyzed separately by race. For the South as a whole, as well as the North and the West, declining places have a lower proportion occupied and a higher proportion of other vacant units.

The magnitude of differences between growing and declining places is often small for the nonwhite South, and several exceptions in relationships were found for this segment when compared to other regional groupings. One possible reason is that total population growth and decline may correspond closely to white population change but not to that of nonwhites. Villages growing in total population may be losing nonwhites and vice versa. Unfortunately, the 1950 population by race was not available for these villages, so nonwhite or white population change could not be determined.

Previous studies comparing growing and declining places have considered different types of places, different time periods, and different sets of character-

TABLE 18.—*Population characteristics of sample villages classified by growth or decline 1950–60, by region, and by race for the South*

Characteristic	North		South				West	
			White		Nonwhite			
	Declining	Growing	Declining	Growing	Declining	Growing	Declining	Growing
Age:								
Under 15 … percent	27	31	24	29	38	40	31	34
15 to 64 … do	54	55	58	58	50	49	55	57
65 and up … do	19	14	18	13	12	11	14	9
Total … do	100	100	100	100	100	100	100	100
Dependency ratios:								
Youth [1]	50	56	42	49	76	82	57	61
Aged [2]	34	26	31	22	25	23	24	16
Total	84	82	73	71	101	105	81	77
Sex:								
Males per 100 females	92.9	94.6	89.2	93.3	89.1	89.2	100.0	98.7
Fertility:								
Child-woman ratio [3]	471	537	369	442	664	730	513	553
Household composition:								
Population per household	2.87	3.12	2.84	3.11	3.67	3.70	3.09	3.30
Households with husband and wife present … percent	68	73	69	74	55	51	71	75
Other relatives per household:								
Children under 18 of head	.87	1.07	.77	.98	1.21	1.30	1.07	1.26
Other relatives of head	.28	.27	.35	.35	.82	.79	.28	.24
Nonrelatives per household	.04	.05	.03	.04	.09	.10	.03	.05

[1] Children under 15 per 100 persons 15 to 64 years old.
[2] Persons 65 and over per 100 persons 15 to 64 years old.
[3] Children under 5 per 1,000 women 15 to 49 years old.

TABLE 19.—*Housing characteristics of sample villages classified by growth or decline 1950–60, by region, and by race for the South*

Characteristic	North		South				West	
			White		Nonwhite			
	Declining	Growing	Declining	Growing	Declining	Growing	Declining	Growing
Tenure and occupancy:								
Percent housing units—								
Occupied	88	92	(1)	(1)	(1)	(1)	79	87
Vacant, for rent or sale	3	3	(1)	(1)	(1)	(1)	6	5
Other vacant	9	5	(1)	(1)	(1)	(1)	15	8
Total	100	100	(1)	(1)	(1)	(1)	100	100
Percent occupied units—								
Occupied by owner	75	75	69	68	54	48	70	67
Occupied by one person	21	16	19	15	20	21	19	16
Occupied by five or more	17	20	15	19	30	32	21	24
With 1.01+ persons per room	7	8	8	11	27	32	12	16
Size and quality [2]:								
Percent housing units—								
With 1 or 2 rooms	5	5	5	8	11	18	11	14
With 7 or more rooms	22	27	15	15	5	4	13	11
Sound, with all plumbing	59	70	56	65	9	11	54	75
Dilapidated	6	4	8	6	32	29	11	5
Percent of all nondilapidated units having all plumbing	74	83	76	80	20	22	85	91

[1] Data not available.
[2] White figures in this section include all unoccupied units.

istics. Some of their findings are consistent with this study. For example, Jenkins *(17)* and Field *(10)* showed the same general age differences for villages, as did Wu *(36)* and Duncan and Reiss *(9)* for larger cities. Jenkins, Wu, and Duncan and Reiss also found that growing places had higher sex ratios and fertility ratios. This suggests a similarity in the dynamics of population growth, with growing centers attracting or retaining more young adults with children.

Summary and Conclusion

Villages in the United States continue to be an important part of the nation's population structure, but are facing significant changes and adjustments in the face of current social and economic trends. The demographic study of the village has been relatively neglected, in part because of the lack of available data. For this analysis I obtained 1960 population and housing census data for a sample of incorporated centers under 2,500 in the United States outside of Standard Metropolitan Statistical Areas. Available characteristics of all these villages together have been compared with other population segments, and I compared groups of villages that were distinguished on the basis of regional location, income of county in which located, and growth or decline for the preceding decade. In addition, separate tabulations were carried out by race for the South.

The major findings of this study are summarized in table 20. In the first vertical section the rank of the sample village population relative to the urban and rural nonmetropolitan segments is indicated. The sample villages rank above urban and rural in concentration of people over 65, percent owner-occupied, and rooms per house.[13] They rank below the other two segments in population per household, percent of households with husband and wife present, persons per housing unit, and room-person ratio. These are variables that appear to be related to the concentration of older people. Villages rank between rural and urban in sex ratio, fertility ratio, and housing quality.

In the second section villages are compared according to region of location, with whites and nonwhites considered separately in the South. This ranking shows that the North and the South white segments are always adjacent in rank, and incidentally more like the total sample village population than the other two segments. The West and the South nonwhite segments are sometimes adjacent in rank, such as having a lower concentration of old people than the other villages, a higher fertility ratio, higher population per household, higher percent owner-occupied, greater number of persons per housing unit, smaller number of rooms per house, and higher room-person ratio. They are at opposite extremes, however, in sex ratio, percent with husband and wife present, and housing quality, with the West high and the nonwhite South low in the ranking.

The third section compares villages according to location with respect to metropolitan centers. The first column is for all villages and the other columns are for appropriate race and regional groupings. Differences are small and sometimes not consistent by region. Villages away from metropolitan centers generally have higher fertility but smaller households and houses, and lower housing quality.

The fourth section shows the results of the comparison of villages classified by median income of their county. Villages in low income counties have a slight concentration of older people according to figure 5, but not enough to show up in a condensed age distribution. In addition they are lower in sex ratio, crude fertility ratio, percent with husband and wife present, percent owner occupied, rooms per house, and housing quality than are villages in other counties. Also villages in low income counties have a higher room-person ratio, but this seems to be due to a higher proportion of nonwhites in these villages, since there is no difference within separate race and regional groupings as indicated by the other columns of this section. For all other variables in this section, the North and the nonwhite South have the same results by county income as all villages combined. The South white segment, however, shows no differences between groups of villages classified by county income except for sex ratio and housing quality.

The last section of table 20 gives the results of differences when villages are grouped by growth or decline between 1950 and 1960. Declining villages have a concentration of older people, lower values for sex ratio, fertility ratio, population per household, percent of households with husband and wife present, persons per housing unit, room-person ratio, and housing quality, along with a higher percent of housing occupied by owner. Differences for regional groupings generally follow the same pattern, although the South nonwhite segment shows smaller differences and a few exceptions in the comparison of these characteristics for growing and declining places.

The general consistency of the findings summarized in table 20 is striking. In the last two sections regional groupings generally show the same results as the total sample villages. Further, the similarity between the two sections is such that declining villages are like villages in low income counties. That is, in general a variable that is lower for villages in low income counties than for villages in other locations is also lower for declining villages than for growing villages. The only exceptions to this across most of the race and regional groupings are percent owner-occupied, rooms per house, and the room-person ratio.[14]

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[13] Persons per housing unit and rooms per house were compared using percent occupied by one person and by five or more, and percent units with one or two rooms and with seven or more. In the few cases where these comparisons were ambiguous, I used appropriate medians.

[14] A cross-classification was carried out for the South white and the South nonwhite segments to see if the findings for county location were sustained separately for growing and declining places, or the findings for growth and decline sustained for villages separated by county location. Although the association of the characteristics by county location is sometimes different for growing than for declining places, and the association by growth and decline is sometimes different for the two county locations, one factor does not explain the findings obtained with the other.

TABLE 20.—*Summary of study findings*

Characteristic	Villages compared with other segments			Villages by region				Villages by location. Far segment is:					Villages by county income. Low income segment is:				Villages by growth and decline. Declining segment is:				
	(High to Low)			(High to Low)				T	N	Sw	Sn	W	T	N	Sw	Sn	T	N	Sw	Sn	W
Concentration of older people	V	U	R	N	Sw	Sn	W	O	O	H	H	O	O	H	O	H	H	H	H	H	H
Sex ratio	R	V	U	W	N	Sw	Sn	H	O	O	L	H	L	L	L	L	L	L	L	O	O
Fertility ratio	R	V	U	Sn	W	N	Sw	H	H	L	H	H	L[2]	L	O	L[3]	L	L	L	L	L
Population per household	R	U	V	Sn	W	N	Sw	L	L	L	L	O	O	L	O	L	L	L	L	L	L
Husband-wife present	R	U	V	W	Sw	N	Sn	O	L	L	L	O	L	L	O	L	L	L	L	H	L
Owner occupied	V	R	U	N	Sw	W[1]	Sn	O	L	H	H	H	L	L	O	L	H	O	O	H	H
Persons per housing unit	R	U	V	Sn	W	Sw	N	L	L	L	L	O	O	L	O	L	L	L	L	L	L
Rooms per house	V	R	U	N	Sw	W	Sn	L	L	O	L	L	L	L	O	L	O	L	H	H	H
Room-person ratio	R	U	V	Sn	W	Sw	N	O	H	O	L	H	H	O	O	O	L	O	L	L	L
Housing quality	U	V	R	W	N	Sw	Sn	L	L	L	[4]	[4]	L	L	L	L	L	L	L	L	L

V:	Village.	W:	West.
U:	Urban.	H:	High.
R:	Rural.	L:	Low.
N:	North.	O:	Difference of 1 percent or less.
Sw:	South White.	T:	Total sample villages.
Sn:	South Nonwhite.		

[1] South White and West are identical.
[2] Standardized rate differences are O.
[3] Standardized rate differences are H.
[4] The three measures of housing quality are not consistently H or L.

One can generalize an additional step. In the first section villages are compared with urban and rural nonmetropolitan segments. Variables with villages ranking lower than the urban segment are usually variables for which villages from low income counties rank lower than those from other counties, and declining villages rank lower than growing villages. (The notable exceptions are sex ratio and fertility ratio.) This indicates that villages correspond to urban places in the way that declining villages do to growing villages, or as villages from low income counties correspond to villages located elsewhere. Thus, it may be said that a declining village or a village from a low income county is like any other village in comparison with larger places, only more so. The fact that villages as a whole are growing more slowly than larger places may help to explain why the characteristics of villages differ from larger places in the same way the characteristics of declining villages differ from growing villages. Perhaps villages also are more likely to be found in low income counties than are larger places.

A general conclusion of this research is that systematic differences exist between villages and other population entities, and between different types of villages. Although these differences are in many cases rather small, the consistency of most relationships summarized in table 20 gives weight to the results even though it was not possible to carry out tests of statistical significance. Generally, white-nonwhite differences are larger than others, revealing that race is more important than type of community in association with these population and housing characteristics.

An unexpected distinction was found between the white and nonwhite categories in the South. The South nonwhite category shows differences in characteristics between the two types of county locations similar to those found in the North and for all villages. The South white category, on the other hand, shows only two differences by type of county. It is only possible to speculate as to the reason. The nature of the variable used may have an influence. Under conditions of segregation, there may be little correlation between white and nonwhite economic levels. Perhaps total county median income is highly associated with nonwhite but not with white median income. If these counties were classified by median white income, and appropriate villages identified, differences for the white population might be found.

There may be a difference in residence patterns for whites and nonwhites in low income and other counties. Low income counties in the South in many instances have a high nonwhite population, and are in areas where tenant farming was formerly important. Negro agricultural laborers and displaced tenants may be concentrated in villages of low income counties, and this may cause a difference for nonwhites between types of counties (5). Whites, on the other hand, may carry out similar activities, and may have similar economic and population change experience regardless of type of county. More concrete information is needed to explain this interesting result.

The nature of this exploratory study precluded the introduction of other variables to characterize different types of villages. An important basic distinction among villages is economic function. Villages are not all agricultural trade centers; many are residential suburbs, and others are manufacturing or recreational centers. Research has shown notable differences among different functional types of villages (34) and larger places (9). Unfortunately, no data are available to make possible the classification of the sample villages by function.

Of all the village traits revealed by this analysis, perhaps the most significant in terms of policy or social action is age structure. Villages have a deficiency of both children and people of working years, along with a marked surplus of older people. Possible relations between this variable and several other population and housing characteristics have been noted. Planners and policymakers should recognize the added problems brought about by having a large older population but relatively few people in the economically active years for maintaining a tax base for the provision of needed services, providing a reservoir of leadership for community improvement programs, and developing the potential to make necessary adjustments to a changing environment in villages of rural America.

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Appendix

TABLE 21.—*Number of villages, population, and occupied housing units for sample village segments*

Sample segment	Number of villages	Population	Occupied housing units
South:			
White:			
Near	123	73,689	23,782
Far	60	33,702	11,305
Growing	98	64,539	20,080
Declining	85	42,212	14,008
Low income county	86	47,317	15,628
Other county	97	59,558	19,671
Nonwhite:			
Near	123	16,548	4,323
Far	60	6,098	1,662
Growing	98	17,404	4,640
Declining	85	5,066	1,628
Low income county	86	14,315	3,800
Other county	97	8,025	2,287
North:			
Near	163	120,880	40,882
Far	146	81,402	27,365
Growing	172	131,306	40,009
Declining	137	70,817	27,378
Low income county	23	14,366	5,178
Other county	286	187,522	63,169
West:			
Near	33	17,063	5,192
Far	45	28,012	8,612
Growing	51	29,036	8,652
Declining	27	16,023	5,152
Total	570	356,893	120,873

ACKNOWLEDGMENTS

This research contributes to a larger project, "Population Changes in Small Towns," which has been supported in part by the Division of Social Sciences of the National Science Foundation, the Research Committee of the Graduate School from special funds voted by the State Legislature, and the National Agricultural Extension Center for Advanced Study. James E. Bailey, Lee J. Haggerty, Darrell Moen, and Lorraine Spanhole assisted in the analysis. The figures were prepared by Glenn Schultz. Marie S. McCabe provided editorial assistance, and Cora Schlimbert typed the final manuscript. Their help is gratefully acknowledged.

Chapter 5

Rural Community Institutions and Poverty, With Special Reference to Health and Education

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Introduction

Throughout most of our history the relationships between local institutions and poverty could be stated in two simple propositions: Poor communities produce and perpetuate inadequate social institutions. Inadequate institutions produce and perpetuate poor communities. In contemporary society the relationships are no longer so simple, although the traditional relationships still are to be found. Both our communities and our institutions are changing rapidly. Local institutions are less likely to depend upon local resources for support, although they still do to a great extent. Personal poverty stemming from institutional inadequacies is less likely to remain in the local community.[1]

Because of widespread migration, wealthy communities are often the reluctant recipients of personal poverty from poor communities. Were this not the case, there would probably not be the widespread interest today in eliminating both personal and community poverty.

The Changing Rural Community

Rural society in the United States has long lived in a remarkable variety of communities—villages, open country neighborhoods, plantations, mill towns, rural townships, and numerous others (*10, 26*). Generalizations about the original nature of our rural communities and changes occurring at the present time are therefore necessarily oversimplified. The traditional concept of the rural community as a small group of farm families living in a limited locale and sharing a set of social institutions has never been easy to apply in the United States. It was particularly difficult in those areas of the country where the dispersed farmstead was the typical form of land settlement. One of the earliest rural sociological studies was conducted as an attempt to "locate" the rural community (*13*), and some sociologists questioned whether true rural communities existed at all.

The reasons for questioning the existence of a true community in areas where dispersed farm settlements prevailed—which was the case in most of the country—have important consequences for present-day community organization and action. Because of their geographic dispersion, farmers in the same political unit—county or township—often did not share a set of common institutions. Institutional service areas varied and overlapped so that even families in fairly close proximity might not share more than one or two institutional services. Such a pattern frustrated the development of strong community attachments except in restricted localities, or rural neighborhoods, which generally had insufficient population to maintain a full complement of services.[2]

Contrary to popular stereotypes, patterns of civic cooperation in rural areas were often quite weak, and so were the public services dependent upon such cooperation. The family was supposed to provide as many services as possible to its members, and the extent to which it was able to do so was a measure of prestige. Local government was expected to provide only those services which capable individual families or groups of neighbors could not provide for themselves. A distrust of concentrated power in government was a basic tenet of American agrarian philosophy. The consequences of this prevailing view of public institutions was especially hard on the poor, who were usually categorized into groups of "deserving" and "undeserving." Widows, orphans, and the aged, sick, and disabled without kin to care for them were viewed as legitimate recipients of public charity, but even they didn't receive much. Chronic family poverty was usually considered "the consequence of imprudence, laziness, and a lack of thrift and foresight" (*27*)—traits which were not to be encouraged through public assistance.

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[1] It is useful to distinguish between "personal poverty" and "community poverty." The former is a characteristic of individuals and families; the latter is characteristic of local societies. See Dunlop (*9*). In this paper we are primarily concerned with community poverty, recognizing that it generates personal poverty that is transferable to other communities. (Italic numbers in parentheses indicate references listed at the end of this paper.)

[2] Johnstone (*19*) has pointed out that with the early development of commercial agriculture, shared commercial and commodity interests quickly replaced shared locality as the basis of social relations for many farmers.

Apart from government itself, schools were the most widely accepted public service institutions by the middle of the 19th century, although some opposition to tax-supported schools was almost universal. The inclusion of secondary schools in the public school system during the latter quarter of the 19th century produced new battles in thousands of rural communities whose citizens saw little need for education beyond the common school level. Local public health services in rural areas were virtually nonexistent, although many communities had health boards and health officers. The extension of county public health service to rural areas did not occur until 1911 *(23)*. Most rural hospitals are 20th century phenomena *(21)*. Public welfare services at the beginning of the present century have been characterized by Gillin as being in a state of "more or less chaos" *(15)*. The chief welfare institution supported by public funds was the poorhouse or poor farm. Even these were lacking in about half the counties. Not until the great depression of the 1930's, however, was the complete inadequacy of local public welfare conceded.

Technological changes in agriculture and transportation brought about radical changes in the rural community and population which have been described in various studies *(4, 12)*. With the mechanization of farming operations, the rural population directly engaged in farm production shrank rapidly until farming was no longer the major source of employment. Practically all rural counties lost population through migration. As the migration streams swelled, even relatively high rates of reproduction were insufficient to replace the losses in many rural areas. The already low population density in open country areas lowered even further, although movements of both people and services into small towns, especially county seats, tended to increase their size and importance.

Improved roads tied the open country to the town, resulting in the strengthening of town-country communities but the weakening of rural neighborhoods. The ties that had bound the latter together—mutual assistance, shared problems, and common interests—were replaced by bonds of interdependence and contractual relationships. These ties of interdependence extended well beyond individuals to incorporate entire institutional systems and communities. The middle-class rural dweller, imbued with the values of American agrarian philosophy, deplored the passing of individual independence, family self-sufficiency, and community autonomy. For those members of the rural society who lacked independence, self-sufficiency, or a voice in local community decisions, the loss probably appeared less tragic.

Changing Social Institutions

Since a community is largely defined by sets of shared social institutions, it is to be expected that the forces bringing about a change in one will also change the other. As earlier indicated, both our institutions and our communities are still in the process of rapid change, so it is difficult to view with any great perspective those changes which have occurred. In the case of rural institutions the problem is made somewhat easier by their tendency to follow established trends in urban areas.

Essentially, a social institution is a cultural device for meeting group needs, usually through employing some form of social structure. Many of the changes that have occurred in our rural institutions reflect changes in the group definition of social need. The "common school" education, for example, was the defined educational need of 19th century rural America, a need which was more or less met by the end of the century. The need for a higher level of education was first perceived in the urban centers where technological and social complexities required more advanced skills. Rural communities, assessing the educational requirements of their own social and economic systems, were much slower to distinguish the new need. Even after the need was recognized they were unable to meet it, or needs in other institutional areas, because of inadequate resources and capabilities.

The development of commercial agriculture and nonfarm occupations brought to rural society many of the same requirements for the operation of an industrial-commercial economy to be found in the cities, with which the rural areas became increasingly linked. Following the model of the urban areas, rural communities sought to meet these needs through institutional specialization. Except in the most isolated areas the rural family began to restrict its functions and to turn them over to other agencies, both public and private. In no few instances the function was fumbled in the exchange.

Largely within the past decade another major change has been taking place in rural service institutions, the consequences of which may prove even more momentous than functional specialization. Traditionally, service institutions have responded to local demand and support rather than to any objective assessment of needs. This is not to say that needs were not defined and means devised to meet them, for that, of course, is what led to the establishment of the institutional departments of education, and either directly or indirectly to national agencies through supportive grants. As grantors, such agencies had and used their power to bring changes in the local schools. Local teachers might belong to a State educational association affiliated with the National Education Association and through those organizations exert pressure to secure legislation affecting the local community's schools. Through such systems of vertical linkage, the power of decision-making affecting local institutions was increasingly shared with extra-local agencies. Despite the contentions of the champions of local autonomy to the contrary, this shift in the locus of power was far from being completely detrimental in its consequences, but it did present greater difficulties of achieving an integration of different institutional services at the local level. As will be discussed later, the problem of "horizontal integration" remains one of the more serious organizational problems faced by community institutions.

Specialization brought with it formal organization and an increasing professionalization of institutional personnel. Local institutional organizations gradually became linked to others outside the local community through "vertical structures." In the public sector, for example, local school systems were tied to State systems in the first place. But needs were largely defined by contemporary and local conditions, and the operations to meet them were geared to the willingness and ability of the local community to provide support.

Institutional specialization, the professionalization of administrative personnel, and—above all—the availability of extra-local financial support have all contributed to the reorientation of rural community institutional systems. Now the institutional service needs of the community are more and more expected to be defined through application of some standard of excellence or at least a national norm. Meeting the needs then becomes an objective for which some program of action is devised, always with the hope that funds will be made available for it. Usually it is thought desirable to have comprehensive community planning in which the whole perspective of service needs is analyzed with the view of providing integrated programs of action to meet them.

This concept of local planning is still alien to many rural communities. In most respects it is anathematic to agrarian philosophy, partly because it concedes additional powers and functions to government, but primarily because planning carries the implication of the loss of freedom. Nevertheless, at least in principle, the idea of institutional and community planning has been accepted to a remarkable degree. Implementation of the planning function, however, requires a degree of technical knowledge and skill often lacking in rural areas. Consequently, the promise that planning and outside support hold as a means of developing adequate rural institutions is still a long way from realization in most parts of the country.

Developing Adequate Community Institutions

Despite the trend toward the development of uniform standards of institutional adequacy, it is very clear that such standards do not exist at the present time. Indeed, it may be neither possible nor desirable to apply completely uniform standards. For ultimately the adequacy of an institutional system must be judged by how well it meets the needs of the community it serves, and it must serve not one but many communities. The question of who shall make the determination of which needs are to be served, in what way, and how well, is the basis of many conflicts between local communities and extra-local agencies, both public and private. Even where agreement exists with respect to both ends and means, standards of adequacy are still widely varied. In 1958, for example, a regional sample of rural residents in the Southern Appalachian Mountains was asked to evaluate the quality of their local schools. By prevailing national norms, most of the schools would have been rated seriously deficient. Yet more than 60 percent of the respondents rated their community schools as "good" or "excellent." [8]

The tradition of local autonomy is still so deeply ingrained in Appalachian rural communities—and perhaps most rural communities throughout the nation—that their residents are usually unwilling to accept the idea that local standards are no longer the best gages of institutional adequacy. Rural citizens are fully aware that most of their youth will migrate to the cities, but this is not sufficient reason in their minds to gear their institutional programs to the needs of urban living. The emotional argument for localism has been reinforced by the pragmatic reasoning of investment economics. Rural communities, often hard pressed to support institutions which are barely adequate even by local standards, have been understandably reluctant to invest greater local resources whose benefits are largely realized elsewhere. The increasing support of local institutions by intergovernmental funds, justified in large measure by the "spillover benefits" argument, has reduced, although far from eliminated, the economic argument for local determinism. Perhaps more important in reducing differences between local and national standards of institutional adequacy have been the urbanization of rural society and the spread of mass communication.

The adoption of higher standards, however, will not in itself eliminate the deficiencies of rural institutions. There are at least three other requisites for the development of effective institutions that must be met: (1) sufficient financial resources; (2) capable personnel; (3) effective organization. Rural communities are faced with severe problems in meeting each of these, and in general the poorer the community, the more serious the problems.

Financial Support of Institutions

Rural communities have rarely supported their public institutions generously. In some cases this has been because of reluctance to do so. More often it has been because of a simple lack of resources.[9] Not all local institutions are public, however; but privately supported services in which costs are borne largely by the consumer are obviously dependent upon the income levels of the consuming public. To the extent that family income is an indicator of the ability of a community to support institutions, the data in table 1 offer convincing evidence that rural counties operate at a decided disadvantage. Median family income in 1959 was less than $4,000 in over half of the most rural counties, and less than $3,000 in more than a third. In contrast, median family income was less than $3,000 in only 1 of 359 metropolitan counties and exceeded $6,000 in 167.

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[8] Unpublished data from the Southern Appalachian Survey, Department of Sociology, University of Kentucky.

[9] A 1962 report of the Advisory Commission on Intergovernmental Relations (*7*) showed relatively little relationship between fiscal capacity and tax effort. Expenditure levels, however, are more closely related to capacity than to effort measured relative to capacity.

There is substantial evidence to support the commonplace observation that the low income population is less likely to use those institutional services for which the costs are largely borne by the consumer. Medical and dental services offer a case in point. During the period 1963-64, families with incomes over $7,000 had 14 percent more physician visits per person than families with incomes under $2,000, according to the National Health Survey (30). Yet it is a reasonable assumption that the general health needs of the low income families were greater than those of the high income families. During the same period, the low income families averaged only 0.8 dental visits per person compared with 2.3 visits for high income families, a difference of 187 percent (29).

Private support

Many local service institutions depend upon private philanthropy rather than consumer expenditures for financial support. This is especially true of private welfare organizations and religious institutions. Although various studies indicate that low income families contribute higher proportions of their earnings to charitable causes than do high income families, the actual amounts contributed per family are substantially less (32). Rural communities operate at a dual disadvantage in seeking to secure local philanthropic support for their institutions. First, as already noted, family income is substantially lower. Second, they are far less likely than urban communities to have well-organized campaigns to solicit funds. Few rural communities have Community Chests or United Funds. The inference that rural institutions are poorly financed through local philanthropic contributions is supported by the data on gifts and contributions to organizations by low income rural nonfarm families shown in table 2. Total contributions per family averaged less than $50 for families with incomes under $2,000, with the greatest share going to churches and religious organizations. Regional figures for the South are shown because it contains a high proportion of the nation's poor rural counties. In general, contributions in the South were lower than for the nation, even with income controlled. Only 3 percent of the southern families with incomes under $1,000 reported contributions to community welfare organizations other than the church, probably indicative of the lack of such organizations in most parts of the rural South.

Much of the support for private welfare organizations operating in rural counties comes from outside the local community, but the extent of extra-local support is difficult to determine without a detailed study of individual agencies. In fact, little information at all is available on a national basis concerning the operations of private welfare institutions. One study conducted in the southern Appalachian region revealed that the number of missionary and philanthropic enterprises increased by 150 percent between 1921 and 1959, even though most of the earlier mission schools had been taken over by the public school systems ([illegible]). Although detailed financial data were unavailable, it is a safe assumption that most of the support for such enterprises originated outside the region.

Institutional services dependent upon extra-local private support can at best be considered only supplementary to those provided by public institutions. In rural areas, privately supported agencies typically operate with small staffs, limited funds, and widely scattered field offices. The selection of field locations is often determined by fortuitous circumstances. Because agency personnel are usually

TABLE 1.—*Median family income in metropolitan and nonmetropolitan counties by percentage of rural population, 1960*

Median family income	Metropolitan counties	Nonmetropolitan counties with rural population of—							
		30 percent and under	30.1–40 percent	40.1–50 percent	50.1–60 percent	60.1–70 percent	70.1–80 percent	80.1–90 percent	90.1–100 percent
Under $2,000						5	16	15	84
$2,000–$2,999	1	8	2	30	34	78	77	47	293
$3,000–$3,999	5	5	30	38	78	100	103	69	316
$4,000–$4,999	60	37	65	86	112	120	79	47	226
$5,000–$5,999	125	64	56	97	98	71	40	19	71
$6,000 and over	167	29	23	14	10	7	1	5	15
Total	359	143	176	265	332	384	316	176	1,005

SOURCE: Unpublished data of National Advisory Commission on Rural Poverty from U.S. Census of Population, 1960.

TABLE 2.—*Average value of gifts and contributions to organizations, by families of two or more persons with incomes under $3,000, total U. S. and rural nonfarm South, 1961*

Residence and family income level	Total organizations		Community chests, Red Cross, etc.		Churches and religious organizations		Educational, medical, political, and other	
	Average amount	Percent reporting	Average amount	Percent reporting	Average amount	Percent reporting	Average amount	Percent reporting
U.S. total:								
Average, all levels [1]	$148.17	91	$21.81	74	$113.80	77	$12.56	20
Under $1,000	30.64	59	2.48	31	26.68	50	1.47	7
$1,000–$1,999	30.97	69	2.13	33	28.25	61	.58	6
$2,000–$2,999	49.47	79	4.18	51	43.37	67	1.93	9
South, rural nonfarm:								
Average, all levels [1]	$120.82	81	$10.16	51	$107.97	74	$ 2.09	12
Under $1,000	4.08	34	.03	3	3.72	31	.34	4
$1,000–$1,999	26.86	66	.73	21	25.84	61	.29	5
$2,000–$2,999	44.17	75	2.51	32	40.99	68	.67	6

Source: U.S. Dept. of Labor. Survey of Consumer Expenditures, *Consumer Expenditures and Income, Detail of Expenditures and Income, Total United States, Urban and Rural 1960–61*. Supplement 3, Pt. A to BLS Report 237–93, May 1966, and *Detail of Expenditures and Income, Rural Nonfarm Areas in the Southern Region, 1961*, Supplement 2 to BLS Report 237–86, March 1965.

[1] Includes income levels above $3,000.

"outsiders," are not subject to usual community controls, and often pose a threat to the power or prestige of local institutional personnel, they not infrequently find themselves engaged in unanticipated and disruptive conflicts.[5] The coordination of private agency services with those of public agencies in the same community is rarely achieved; this reduces their potential effectiveness.

Local public support

Most basic institutional services in local communities are supported in varying degrees by public funds, the rationale being that their services benefit the entire community and not simply the users.[6] Religious services provide a major exception because of the traditional separation of church and state. However, religious organizations have increasingly received support from public funds for functions such as health and education whose benefits are considered to extend beyond the particular denomination.

Despite growing support from intergovernmental sources, about 70 percent of all local governmental revenues still originate in the local community *(7)*. More than three-fourths of the local revenues are derived from local taxes, the remainder coming from user charges and miscellaneous sources *(20)*. Property taxes provided about 88 percent of all local tax revenues in 1963. Rural counties and townships derive an even higher proportion of their taxes from property, and for school districts property taxes provided 98 percent of the local revenues in 1963.

We have already noted that public agency expenditures are largely dependent upon fiscal capacity. It is obvious, therefore, that disparities in local resources, which provide 70 percent of the support for local government services, are going to be reflected in gross inequities in institutional support from one local community to another. This is readily apparent in table 3, which shows per capita local government revenues and selected expenditures from a sample of low income rural counties[7] compared with other counties of comparable population. The low income counties actually were slightly more dependent upon local sources for their revenues than were other counties in their population size-groups. The proportion of local support—about 62 to 63 percent—was less than the national average of about 70 percent, however. Per capita revenues from local sources for the low income counties averaged from 35 to 40 percent of the national average, and about half those of counties in comparable size-groups. Intergovernmental revenues reduced the disparities between low income and other counties of comparable size on a percentage basis but not in terms of absolute amounts. In the 10,000 to 25,000 population size-group, per capita general revenues were $47 less in low income counties when only local revenues were considered, but $52 less when all sources were included.

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[5] Physicians introduced into rural eastern Kentucky through employment by the United Mine Workers Memorial Hospitals, for example, were initially barred from local medical society membership in several counties in which the hospitals were located, evidence of the resentment at their "intrusion" despite the severe shortage of physicians in the region.

[6] This is not to say, of course, that all agencies providing a basic service are publicly funded but rather that some public funds are used to help provide basic services.

[7] The 101 low income rural counties represent a 20-percent systematic sample of the bottom quintile of counties arrayed by median family income in 1959. For the listing of counties by quintile rank, see *(17)*.

TABLE 3.—*Per capita revenue and selected expenditures of local government in 101 low income rural counties, by population size-group, compared with U. S. averages, 1962*

		Population size-group					
		Under 10,000		10,000–25,000		25,000–49,999	
Revenue, source, expenditures, function	Average all U.S. counties	Low income sample (39)	All counties	Low income sample (44)	All counties	Low income sample (18)	All counties
General revenue	$213.82	$129.32	$190.21	$111.78	$163.64	$121.48	$163.56
From local sources	148.90	61.21	118.53	50.64	97.35	58.32	99.04
General expenditures	222.10	123.03	187.58	120.08	165.43	135.89	168.33
Education	100.07	78.09	99.65	73.75	89.61	72.68	89.59
Public welfare	14.36	4.89	10.27	2.36	8.62	3.47	8.10
Health and hospitals	12.15	2.14	9.44	5.43	8.87	10.39	10.04

Source: Dept. of Commerce, Bureau of the Census, *Census of Governments 1962*, Vol. IV.

General revenues on a per capita basis for the three size-groups of low income counties ranged from $85 to $102 less than the average for all U.S. counties. This would be a less serious problem if institutional service could be provided at a lower per capita cost in rural counties, assuming comparable quality. Under present conditions, the reverse is more nearly true. Counties with less than 5,000 population, which are rural counties for the most part, have higher per capita operating costs than do all larger population size classes (*25*). The combination of a dispersed population and relatively small numbers raises costs while preventing economies of scale. The transportation costs stemming from population dispersion, if absorbed by the agency, mean less money available for other services. In the most extensive survey conducted of rural schools finances, transportation costs were found to absorb almost 10 percent of current expenditures compared with less than 1 percent in large city school systems (*14*). If the transportation costs are passed on to the consumer (as in the case of most medical service), the result is usually to reduce the utilization of services by those who usually most need them.

It is sometimes argued that rural areas do not need certain types of services (e.g., sewerage) required of urban places so that comparisons of local government expenditures are not valid. If one considers only total expenditures, the argument has some merit. As the data in table 3 show, however, per capita expenditures are greater in urban places for the specific functions of education, public welfare, and health and hospitals, for which the needs are at least as great in rural as in urban communities. Per capita expenditures tend to rise in all functional categories with rise of median family income in a community (*23*), and as table 1 has already shown, median family income rises with the proportion of the population classified as urban.

Intergovernmental aid

The most feasible and widely used method for financing local public institutions is intergovernmental aid. The proportion of local government expenditures from State and Federal sources has increased from less than 6 percent in 1902 to 27 percent in 1964 (*7*). In fiscal year 1964, local government units received more than $13 billion in State aid, while the States in turn received $9 billion in Federal aid (*7*). The largest proportion of State intergovernmental expenditures goes for education—about 59 percent in 1963 (*20*). Intergovernmental funds amounted to only 37 percent of local government expenditures for education but 69 percent of the expenditures for welfare. Welfare funds are usually not allocated on a matching basis, which undoubtedly accounts in part for the relatively low proportion of local tax funds being expended on welfare functions. More than half of the public welfare expenditures by State and local governments in 1963, in fact, came from Federal sources compared with less than 10 percent of the expenditures for education (*20*).

While Federal aid lessens the inequities in public expenditures between States, and Federal-State aid reduces disparities between local units, tremendous variation in per capita expenditures continues. In 1963 State-local per capita expenditures, exclusive of Federal grants, ranged from $493.54 in Alaska down to $173.34 in South Carolina (*20*). Since costs are exceptionally high in Alaska, the second high State, California, with per capita expenditures of $417.93, may offer better comparison. Expenditures without Federal grants were nearly 2½ times greater per capita in California than in South Carolina. Including Federal grants, per capita expenditures in California ($464.98) were still more than twice those in South Carolina ($210.44).

It should be obvious that Federal aid has been little more successful thus far in correcting State financial deficiencies than State aid has been in remedying local deficiencies. This is not to say that Federal aid has not been highly beneficial in certain instances. The Hill-Burton hospital construction program initiated in 1946 is one of the better examples. The legislative provisions of the Hill-Burton Act specifically favored rural communities. Through

June 1965 more than 74,000 general hospital beds were made available in communities of less than 10,000 population, and about 87,000 beds in communities of 10,000 to 50,000 population (*28*). Although isolated rural counties still had only half as many general hospital beds per 1,000 population as did metropolitan areas (*24*), the more critical shortages had been met. Unfortunately, the construction of rural hospitals provides no assurance that they will be adequately maintained or staffed, and there is some evidence that local funds raised as Hill-Burton matching costs have been at the expense of other equally vital programs.*

Since most of the current programs to combat poverty are predicated on the equalizing effects of intergovernmental aid, especially Federal aid, the extent to which such equalization actually occurs will merit close attention. In the only major study to date of funds expended through the Office of Economic Opportunity (*1*), the findings of the staff of the Advisory Commission on Intergovernmental Relations were hardly encouraging. Comparing the nation's wealthiest 100 counties with the poorest 100 (all of the poorest were rural), the Commission concluded: "Many of the poorest 100 counties, measured by per capita income, have not been reached by programs of the Act. In contrast, most of the richest counties, on the same per capita basis, are participating fully in the program. Rural areas in particular seem to lag behind urban areas."

Specializing on the causes of the rural lag, the authors of the report observed: "In view of the reliance the grant-in-aid program places on State and local applicants, it is significant that local government in rural areas is relatively weaker than in urban areas and presumably less able to apply for and administer Federal programs."

Resource support for rural institutions

Lack of financial resources is undoubtedly the greatest single cause of institutional inadequacies in rural communities. Effective application of private funds can assist in meeting financial needs, but by far the greatest reliance must be placed on public funds. Most rural counties have very limited tax bases from which they must currently derive about five-eighths of their general government expenditures. Their greatest source of local tax monies is real property, which is often of low aggregate value to begin with, underassessed, and taxed at a low rate.

No doubt additional local revenues could be raised through full assessments and more efficient administration of existing tax laws. Sales and income taxes, which have been adopted in many metropolitan counties, are of dubious value in low income rural counties. But even if all tax measures that have any possibility of local acceptance are used, there is little likelihood that most low income rural counties have the resource capacity to support a set of local institutions at an adequate level by prevailing national standards. If adequate institutions are to be developed, increasing support must obviously come from extra-local sources.

The development of effective and equitable programs of intergovernmental aid is a tremendously complex task about which much is still to be learned. In most functional areas the administration of such programs leaves much to be desired. As has already been noted, placing heavy responsibility upon local communities to plan and administer federally funded antipoverty programs puts rural communities at a distinct disadvantage and unquestionably reduces the effectiveness of the funds expended. "We are midstride in a revolution in the structure of Federal-State-local relations," Bonnen has observed (*6*). His is no overstatement. Largely on the outcome of the revolution will depend how soon and how completely rural poverty is eliminated.

Staffing Local Institutions

Second to financial resources, the greatest deficiency of most rural institutions is a shortage of well-trained personnel. "State and local governments now function in an age of unrivaled administrative complexity," Senator Edmund S. Muskie recently stated. "Never before has the need for professional competence and efficiency been so critical at these levels of government" (*22*).

Until well into the present century rural service institutions were largely part-time enterprises administered either by laymen or by professionals who were expected to gain most of their income in other ways. This practice was consistent with both the democratic tenets of agrarian philosophy and the limited financial support available to most rural communities. Specialization and professionalization of institutional systems were urban phenomena made possible only through large population concentrations. Their extension into rural communities was partly emulative behavior by more progressive communities seeking to raise standards of performance. More often professionalization and specialization were forced upon the rural community by legislative requirements, accreditation requirements of professional organizations, or functional requirements imposed by funding agencies.

The handicaps carried by rural communities in the competition for nationally scarce professional personnel have been almost impossible to overcome. Instead of large concentrations of population which permit specialization, rural areas have relatively small and dispersed populations which in many instances have been shrinking as a consequence of migration. The better educated young people, who are best qualified to assume professional roles, have made up a disproportionate share of those who have migrated. Rural schools are less likely to prepare their students to become professionals. Youth who are inclined toward professional careers are more likely than not to be trained in urban centers and taught methods that are often inapplicable in rural areas which lack supportive facilities and personnel. The lack of institutional support and the cultural amenities in most low income rural communities is a major deterrent to attracting professionals.[9]

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* One may note in table 3, for example, the high per capita costs for health and hospitals by low income counties of 25,000 to 50,000 population, but the low per capita costs for public welfare in comparison with other counties of the same size.

Only one employed male rural resident in five was engaged in a professional or technical occupation in 1960 compared with two of five in urban places. A comparison of professionals in selected occupations per 100,000 population in rural and urban areas is provided in table 4. The higher ratio of public school teachers to total population is misleading in that rural areas contain higher proportions of children. The datum also conceals the ineffective utilization of rural teachers because of the great number of very small schools.[10]

TABLE 4.—*Number of workers in selected occupations per 100,000 population, urban and rural, United States, 1960*

Occupation	Number per 100,000 residents	
	Urban areas	Rural areas
Physicians and surgeons	161.2	52.4
Dentists	60.0	21.9
Pharmacists	63.9	23.3
Nurses, professional	387.3	194.7
Teachers, elementary	568.0	548.5
Public	460.7	493.2
Private	107.3	55.3
Teachers (not elsewhere classified)	96.3	58.0
Librarians	56.4	27.1
Clergymen	108.3	120.3

Source: Bird (5, *table 21*).

If one may generalize to other professions from the distribution of health personnel, the general shortage of professional personnel which characterizes rural areas is even more acute in low income counties (table 5). These low income counties are much less likely to be within commuting distance of metropolitan areas, where professionals are most heavily concentrated. Relatively large time and travel costs, therefore, must be added to the usual professional fees for services when residents of these counties are forced to go outside the local community to secure services. The personnel shortage thus places a heavier financial burden on the very communities that are least able to bear them.

TABLE 5.—*Health personnel per 100,000 population, by county group, U. S. total, and sample of 101 low income rural counties, 1962*

County type	Personnel per 100,000 population		
	Medical doctors	Dentists	Nurses (active)
All counties	142.9	54.1	300.0
Greater metropolitan	195.4	71.0	327.5
Lesser metropolitan	145.3	52.0	339.6
Adjacent to metropolitan	85.6	38.7	254.2
Low income sample	63.2	18.4	144.4
Isolated semirural	94.2	40.6	242.8
Low income sample	57.4	23.5	92.7
Isolated rural	53.0	27.4	125.9
Low income sample	41.1	12.2	84.4

Source: Pennell and Baker (*24*). Low income counties comprise a 20-percent sample of the bottom quintile of counties classified by median family income.

The injurious consequences for rural communities from the shortage of professionals is not limited to the greater inconvenience and higher costs of obtaining professional services. Increasingly it is the professional who must link local institutional systems to various specialized outside agencies, especially those which provide programs and supporting funds for local services. It is the professional functionary who is most likely to be aware of new programs and their funding requirements. In technical areas, he may be the only one sufficiently familiar with the language of an act or directive from an outside agency to comprehend its meaning or appreciate its implications. Urban communities are at an obvious advantage in working with State and Federal programs and agencies because of their greater number of professionals. And because they work in and are often products of an urban environment, government program designers are likely to assume the availability of community specialists to carry them out. Criticizing the "urban bias" of community action programs of the Office of Economic Opportunity, Gilmour (*16*) recently charged:

> Prepackaged programs are designed with urban resources and realities in mind; program guidelines and CAP Memos are often neither meaningful nor appropriate for rural community action agencies; personnel requirements (e.g., as with Head Start projects) are impossible to honor, due to the scarcity of professional personnel in rural areas, and the program application forms and analysts' review requirements appear premised on sizeable and specialized CAP staffs, when the typical rural CAP may have one, or at

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[9] In a recent study of 45 physicians who left rural practices in eastern Kentucky (*11*), 40 percent listed unfavorable living conditions as a major reason for leaving while only 7 percent listed professional dissatisfactions. Their decisions to migrate were undoubtedly influenced by their wives, 83 percent of whom were dissatisfied with the schools in the area, 76 percent with the cultural opportunities, 69 percent with recreational facilities, and 59 percent with the shopping facilities. Although eastern Kentucky may offer an extreme case, the basic problems in the attraction and retention of professionals which it faces are general to most low income rural areas.

[10] Despite the tremendous progress made in school consolidation, which reduced the number of school districts from 127,531 in 1931–32 to 40,520 in 1959–60, over half of the districts in 1959–60 contained fewer than 150 students (*18*).

most, two professional staffers who must triple and quadruple "in brass."

The multiplicity of functions that must be performed by paid staff members in rural communities is also characteristic of unpaid citizen volunteers. With the greater emphasis on program planning to be found in nearly all institutional systems, higher levels of both general and specialized knowledge are required. The average resident of a low income rural community is neither highly educated nor accustomed to working with abstractions. Although some "representatives of the poor" may make signal contributions to planning, more usually their participation in planning operations represents *pro forma* compliance with Federal guidelines. If programs are to be developed in the local community, the major burden falls heavily on the relatively small number of well educated (often professionals already overtaxed in their own fields). With the growing multiplicity of programs, their limited time and energies are quickly dissipated. The need to utilize more effectively the limited available supply of professionals is generally recognized, but it is not likely to be met until greater coordination of institutional programs is achieved.

Effective Organization of Local Institutions

Many of the more troublesome problems of local institutions can be directly attributed to their organization. These problems include some of the financial and staffing difficulties that have been previously discussed. In considering the organizational structure of local institutional systems, a number of aspects must be examined. One is the internal organization of the local system. A second involves the "vertical" relationship of the local system to extra-local agencies at a higher administrative level. And a third concerns the "horizontal" relations of different institutional systems within a given community.

Internal organization

It is impossible here to discuss the various problems of internal organization faced by local institutions. The major one, however, is the small size of most local organizational units located in rural communities.[11] These are not only inadequate to render good service in many instances but also tend to be more expensive on a unit service cost basis. The most practical solution to this problem is one that is already being followed in many areas—i.e., the functional consolidation of smaller local units into larger districts or regional units.

Federal and State agencies, understandably, have promoted functional consolidation more actively than have local institutions. Some of the grant policies of both Federal and State governments, however, have tended to preserve inefficient local units. Incentive grants based on savings achieved through consolidation would probably be high-yield investments in most institutional areas. The policy of organizing all State services to local areas on a regional basis is gaining rapid acceptance and should probably be accelerated. Regional specialists in a great variety of institutional areas could be made available to local communities through the Cooperative Extension Service of land-grant colleges operating in every State. Although some progress has been made in this direction, the full potential of State technical service to rural communities is far from realization.

Vertical organization

The linking of local institutional systems to extra-local agencies, as previously noted, has generally meant a loss of control by the local community over certain decisions affecting it. It is difficult to evaluate this shift objectively because of the strong sentiments surrounding the concept of local autonomy. One might well question whether local communities have lost power in any absolute sense, since they often had no alternatives on some of the issues currently disputed. Like the question of States rights, the matter of local autonomy is not likely to be cleanly solved by some absolute decision but rather will continue to plague public administrators for years to come.

Viewed administratively, the major problems of moving decisions to extra-local agents involve the ability of such agents to assess local situations and the ability of local communities to coordinate institutional activities over which they have little control. The centralization of decision-making authority at levels far removed from the local community must inevitably result in some serious inequities. Because administrators tend to look at "average" situations when faced with a great number of individual units and because the "average community" is no longer rural, it is very often the rural community that comes out the loser. In recent legislation involving Federal grants-in-aid, greater power has been allocated to the States. Regional or district units within States might be strengthened by the States transferring to them some of the authority granted by Federal legislation.

Some special word must be said about the difficult position of the local administrator, who is frequently caught in a crossfire of conflicting demands and expectations from community groups and higher echelons of the vertical system. The pressures upon him are especially great in the rural community where official and personal roles are less likely to be sharply differentiated. A decision to support or not support a community position contrary to that of an outside agency (especially the Federal Government) is not simply an administrative action in many small communities. It is an act of personal loyalty or disloyalty to one's neighbors—a fact which administrators reared in the impersonal environment of large cities often fail to appreciate fully.

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[11] The large proportion of small school units has already been noted. In 1960 there were about 15,000 school districts with fewer than 50 students, whose operating costs per student in average daily attendance were exceeded only in systems with 25,000 or more students (*18*). More than a third of 865 county-owned general hospitals in 1964 had fewer than 50 beds. Their occupancy rates were lower than those of larger hospitals and, with the exception of hospitals with 400 to 499 beds, their expenses per patient day were higher than those of the larger hospitals (*3*).

Horizontal integration

One of the few advantages which rural communities have enjoyed over larger urban communities has been their ability to achieve some coordination of the many different local institutional services. To a considerable degree this coordination has been achieved through informal channels. The relatively small number of institutional functionaries makes possible—indeed, necessary—their getting together frequently with each other and with influential citizens. They are more likely to participate in the same service clubs or social activities, which provide opportunities to discuss developments in various institutional areas. The same citizens may sit on the boards or committees of half a dozen or more community associations.

The power vested in a relatively small number of persons in most rural communities has been of great concern in the various antipoverty programs, for the decision-makers rarely represent the poorer elements of the society. The frequent assumption that rural community power is necessarily monolithic or pyramidal is not supported by empirical evidence (*32*). Neither can it be validly assumed that all local decision-makers are opposed to the legitimate interests of the poor or fail to be aware of their problems. However, it is no doubt true that the interests of the poor are not represented among rural decision-makers to the extent of other interests.

The policy of funding private nonprofit organizations to administer antipoverty programs and requiring "maximum feasible participation" of the poor has undoubtedly had beneficial effects in many communities. It has provided a means of bypassing institutional systems that were inactive, caught in the ruts of traditionalism, or exploitative of the poor. It has also developed interest in community programs on the part of the poor through their involvement and, in so doing, has provided a hope for many that their lot could be improved.

These substantial advantages of special program agencies must be weighed against some serious disadvantages, however. The establishment of such agencies adds new units to an already cluttered system of institutional structures, creating greater complexity and making more difficult the task of comprehensive planning and coordinating of institutional services. Existing services are sometimes duplicated, and competition for scarce professional personnel is increased. Often there is no real net gain in service personnel to the community but simply a shifting of individuals from one position to another. Programs of such special agencies are usually considered "temporary" by the local community, and while involved citizens may perform the ritual of developing long-range plans, there is an understandable lack of confidence that they will be carried out. Because they lack fiscal authority, most nonprofit private agencies are placed in a vulnerable position by any requirements for matching funds. These various disadvantages seem serious enough in their import to warrant a full review of the effectiveness of the nonprofit private agency in providing services supported by public funds.

Whatever its advantages for service coordination, the local unit is generally too small to finance and staff efficient programs, as we have already noted. The comprehensive service district or region proposed, and in some cases developed, as a means of achieving greater efficiency also has some appreciable advantages for coordinating institutional services. President Johnson's Executive Memorandum directing Federal agencies to coordinate their planning and development district boundaries with those of State agencies is a major step toward achieving program integration and clearing the cluttered map of diverse and overlapping units that defy coordination at any level.

Summary and Conclusions

The basic assumption under which we have operated in this paper is that rural community poverty is both a cause and an effect of inadequate local social institutions. Three sets of factors have been explored in their relationship to institutional inadequacies in low income rural areas: (1) financial resources; (2) institutional personnel; and (3) institutional organization.

Most rural communities do not possess adequate financial resources to support effective social institutions whether they depend upon tax or private maintenance. Realistically, there is little likelihood that the great majority of low income communities will develop sufficient local support in the near future. To date, extra-local financing from Federal and State as well as private sources has not been sufficient to overcome existing deficiencies. It is apparent that outside funds must be substantially increased if effective local institutions are to be developed. In many local areas current fiscal capacity is not being fully utilized, even within the limits of existing legislative provision. State governments should be encouraged to provide incentives and technical assistance to increase local tax efforts, but minimal programs of institutional services should be provided regardless of local fiscal support. Both Federal and State agencies granting funds to local communities should encourage scale economies through the development of larger institutional service units to the fullest extent feasible, recognizing the limitations imposed by sparse and dispersed populations in some large land areas of the nation.

Shortages of professional personnel in rural communities stem only in part from the lack of financial resources. In many instances professionals also lack the organizational support, facilities, and professional contacts which they consider necessary for the satisfactory performance of their professional roles. The absence of cultural amenities and good schools in low income rural communities is also a deterrent to recruiting highly educated professionals. In the face of an existing shortage of and growing demand for most categories of professionals, there is little prospect that most rural communities will overcome these handicaps. The best hope for the attraction and efficient utilization of professional personnel would appear to be in the establishment of comprehensive institutional service centers in which professionals could be concentrated to provide services to local communities within a defined district.

Institutional specialization and the shift of decision-making authority out of the local community have made much more difficult the task of coordinating institutional services to produce optimal community benefits. The problem of service integration has been further complicated by the existence of a multitude of overlapping service districts. Here, too, the establishment of coincident service areas with comprehensive service centers would appear to offer a feasible solution to one of the major problems plaguing small communities. Progress which has already been made in several States in establishing coincident service areas indicates that the difficulties imposed by existing political subdivisions are not insurmountable. The development of congruent service areas should be accelerated with full State and Federal support, and, where possible, service districts should be provided with legislative and fiscal authority.

The current practice of some Federal agencies, notably the Office of Economic Opportunity, of encouraging small, independent, and often uneconomical programs should be reviewed in the light of long-range objectives. There is no intrinsic reason why some of the more praiseworthy features of such programs, including the participation of the poor in self-help activities, cannot be incorporated within a more comprehensive and better coordinated framework of social action. The achievements of many present programs should not be discounted. In the long run, however, both poor communities and poor people are likely to benefit most from the development of well-organized and adequately staffed institutional systems with carefully planned, long-range programs of service.

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Chapter 6

Infrastructure in Rural Areas

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Introduction

The infrastructure of an area refers to the basic public investment in streets, highways, and railroads; water and energy supplies and distribution systems; education and housing; and expenditures on the social and cultural environment (*32*, *102*).[1] These investments in social overhead make possible the provision of basic services to the commodity-producing sectors—agriculture, forestry, mining, and manufacturing; they also make possible the provision of needed social services and of investment in the human agent.[2] The health, education, welfare, and public administration activities of an area are viewed as part of the infrastructure for the facilities themselves would not be built without the certainty of these activities taking place in the area.[3]

Rural areas fall into at least two major categories—those that are growing and those that are not (when measured by net positive or negative change in population from one period to the next). The growing rural area is characterized by an increasing number and variety of linkages with the larger economy of which it is a part (*104*). Agriculture, for example, though declining in its total labor force, is expanding total output and, particularly, output per worker. Similarly, the agriculturally related industries and services, though declining in their labor force, are expanding in the total volume of goods and services produced. The labor force released from agriculture and agriculturally related activities may find employment in the service industries of the area that, too, are expanding because of the growing productivity and affluence of the area's basic industries. The growing prosperity of the area is manifested, therefore, by a proliferation of local services.

Growing rural areas are transitional areas inasmuch as, typically, economic growth means graduation of the area's principal population centers into a metropolitan status—i.e., a total population exceeding 50,000. Frequently a growing rural area has a principal service center approaching the 50,000 mark, while several of the lesser service centers also are increasing in total population and influence.

The declining rural area is characterized by a rapid outmigration of farm people and a corresponding decline in local service centers. Typically, the declining rural area also has experienced the loss of a former resource base, such as mining and lumbering, or the minerals and forests that supported the rural work force in an earlier period of its history. Presently, the area suffers from above-average outmigration and below-average income levels.

A rural area with only rudimentary forms of public services is marked, also, by low income levels. Attributing the poverty to a lack of development of the infrastructure, however, puts the cart before the horse as long as the resource base and the geographic location of the area are unfavorable for rational industry location. Lack of rural economic growth and development is fundamentally a function of low resource productivity, which in turn is influenced by a variety of considerations, including the community and social capital that is a prerequisite for acquiring the individual skills and social attitudes that make possible high rates of resource productivity (*43*, *92*, *114*, *136*, *156*, *163*).

High rates of increase in agricultural resource productivity have increased farm production per worker and made redundant a substantial portion of the farm labor force. Lack of appropriate job opportunities or, alternatively, lack of appropriate skills on the part of the farm labor force to fit the job specifications of an urban society has forced many farmers to remain underemployed. Thus, the cost of unemployment and underemployment in rural areas, which is the other side of the story of economic progress, has been borne by rural people, not only in terms of the potential loss of income from better paying nonfarming jobs, but also in the actual cost of sustaining both the young and the aged in these rural areas (*140*, *164*).

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

[2] Some writers emphasize even more strongly the importance of the infrastructure in economic development; for example, Pawera (*121*, p. *3*) calls it "the sine quo non of economic development and growth."

[3] This concept of the infrastructure is essentially the same as Martin's (*114*, p. *82*) concept of community capital, which he defines as the "facilities and organizations used to produce public services for communities, including streets and roads, sanitary and water systems, parks and recreational facilities, libraries, police and fire protection, education, hospital and health services, museums and other facilities for producing aesthetic services, recreation, and so on."

Too frequently the present-day farmer finds low income farming still the best alternative in his lifetime. At the same time, the education of his children for an urban society falls largely upon his own and his community's resources, as does the maintenance of local welfare services, many of which he provides in a manner customary of traditional society. Investment in the rural infrastructure is, therefore, a concern that extends beyond the boundaries of rural communities and that encompasses the social needs of several generations of farm-born people—those now in farming, those in school, and those now retired.

As long as a large number of rural people are unable to find satisfactory off-farm employment opportunities, and as long as the young must be educated and the aged and others must be provided with minimal levels of social services and comfort, public investments will be made in roads, schools, hospitals, airports, water, gas and electric systems, and cultural and recreational facilities. However, an important question arises with reference to the location of these public investments, and the economic criteria for delineating their service areas (to take cognizance of possible economies of scale without adding unreasonably to the burdens of the individual family because of a lack of proximity to the service). Indeed, the geographic location of the public investment and public services will have a decisive influence on rural settlement patterns for decades to come.

If additional social overhead investments were confined to growth centers of less than 50,000 population, then many families would tend to move closer to these local areas, bringing along with them a host of other activities that cater to their private needs and that depend upon these families for their labor services. On the other hand, if the additional social overhead were distributed uniformly among all service centers in the area on the basis of population, it is likely that many of these trade centers would experience a temporary slowdown in their rate of decline. Yet, the social overhead still may be inadequate to attract new business activities and to retain the young people who cannot find employment opportunities locally.

It can be argued, therefore, that the focalization of public investments and many public services in the principal growth center of a rural area, which is within convenient commuting distance from all households in the surrounding area, can contribute more to rural area development than the dispersion of all public investments and services on a headcount basis. An adequate and not overburdensome infrastructure is, therefore, a necessary but not a sufficient condition for rural economic growth and development.

To show the role of the rural infrastructure in economic growth and development, selected growing and declining rural areas are identified and the relationships between the infrastructure and the economic base in these areas are estimated and evaluated with reference to their implications for rural industrialization, employment, and income distribution. Subsequently, generalizations about the relationship of rural infrastructures to rural employment and income patterns are made with particular reference to alternative approaches to public investment in rural areas.

In summary, this study emphasizes the possibilities of expanding the real consumption choices of rural people and, also, increasing the number of families and individuals who participate actively in the production of national wealth.[4] Accordingly, this study is concerned with public investment alternatives in rural areas and the necessary relation of these investments to rural economic growth and development.

Rural Industrialization

The occurrence of profitable investment opportunities for the development of commodity-producing export industries has been, historically, a precondition for more widespread regional economic growth and development (*132, 133, 143*). When the investment opportunities represented mineral deposits or vast expanses of forest, large-scale industrial operations were set up for materials processing, either at the site or at more distant manufacturing centers (*9, 19, 148*). Thus, the exploitation of natural resources was accompanied by construction activity at the plant site, and on the transportation routes connecting the primary producing area to processing centers and markets.

Agricultural development required a host of trade and service activities in the commercialization of the production process, which also became oriented to export markets. Essential differences occurred between mining and forestry on the one hand, and agriculture on the other, for example, in the exploitation of the resource base, namely, the degree of vertical integration and the degree of institutional permanency. The organizational fragmentation of the productive processes meant, moreover, a dependence upon individual enterprise in providing the primary producers with essential goods and services.

New job and investment opportunities emerged as the resource base expanded, which attracted merchants, bankers, doctors, and other professional people to cater to the needs of a rapidly growing population. Meanwhile, the investment in social overhead included the construction not only of basic community facilities, such as transportation, communications, water, light and power, but also hospitals, schools, civic auditoriums, and parks (*41*). Indeed, each stage in the economic evolution of an area was marked by an expansion of public services and of public investments in community and human capital (*99*).

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[4] Kuusi (*98, p. 84*), in commenting on social policy in Finland, observes that "no society striving for economic growth can afford to let the aged, the disabled, and those outside the productive processes in general, on the one hand, and the individuals of smallest means participating in the productive process, on the other—to let all these people alone, so that they would not even try to improve their level of living." Kuusi contends that the place and function of social policy is "to mobilize the whole population for the promotion of economic growth."

Regional Growth Stages

In the staging of economic growth, typically one starting point is the development of a frontier region, or a mature region that is experiencing a new cycle of economic growth. The takeoff to industrialization, or to self-renewal where industrialization has occurred already, is characterized by net capital imports that support the private investment in industrial plant and equipment and the public investment in social overhead (*150*). In the frontier region, a regional center emerges as a focal area for channeling the flows of materials, men, and money from the developed regions to the peripheral areas of the frontier region (*64, 111, 122, 193*).

The second stage of economic growth is marked by proliferation of the economic base and infrastructure and by a rapid expansion of the service sector. Growth centers emerge in the peripheral areas of the frontier region to become eventually the focal points for a system of local service centers that, together, make up the urban structure of the new economic areas (*100, 178*). The second stage involves, therefore, a subregionalization of rural and urban activities. In addition, the stage of proliferation is characterized by a net export surplus on current accounts, which, however, is erased by the income payments on earlier borrowings. Thus, net capital imports persist as a characteristic of both the first and second stages of regional economic growth.

The third stage is one of stabilization. The peripheral areas reach their peak levels of population and employment and, because of resource depletion, these areas face prospects of continuing population outmigration, along with the attendant costs of supporting excess capacity in social service structures (*66, 83*). The net export surplus increases but the income payments on earlier borrowings no longer exceed the net surplus on current accounts. Thus, the stabilization stage is marked by net capital exports, which signals the exhaustion of local investment opportunities. Substantial population redistribution also occurs within the region and the rural areas within the region. However, only the smaller local service centers may experience a decline in total population and employment.

The fourth stage of regional growth is one of depopulation and economic decline. The stage of decline is marked by consolidation of urban centers, with perhaps some of the submetropolitan growth centers reverting to a local service center status and with the conversion of some rural areas into wilderness areas or other sparsely populated zones of human activity. Net export surpluses on current accounts gradually decline, but net import surpluses on capital accounts, in the form of income payments on earlier lending, increase (*88, 150*). Thus, property income payments, along with transfer payments increase in relative importance. Without the property income payments to residents of the region, economic decline would occur even more rapidly.

The accumulative effects of population outmigration impose extra burdens on a substantial segment of the population that lives on fixed incomes. Generally, self-imposed scarcity characterizes the attitudes of main street merchants and property owners in the depopulation stage (*195*).

Geographic Linkages

Historic data covering several multicounty areas in the North Central States were assembled as part of this study to show the pattern of economic development in both growing and declining rural areas. Each of the areas includes a service center of more than 2,500 population and, in the case of the growing rural areas and one of the declining areas, of more than 25,000 population. The selected economic areas, to which reference is made later in this report, belong to several economic regions that focus on metropolitan centers of more than 250,000 population. The metropolitan centers, more so than the submetropolitan centers, are the nodal points of an emerging interstate and interregional highway network.

The interstate highway network provides a crude basis for delineating one regional system—the one focusing on the large metropolitan centers. Assuming that every Standard Metropolitan Statistical Area of more than 250,000 population is an eligible candidate for the title of Regional City, then at least 10 major metropolitan centers cast their influence upon one or more of the multicounty areas (*48*). For the selected economic areas, the Twin Cities, Omaha, Des Moines, and Chicago are their regional centers; they are readily accessible by car or plane from each of the growth centers.

A second level of urban services is focused in the metropolitan growth centers of less than 250,000 population; these centers are the growth poles of multicounty metropolitan economic areas.[5] The metropolitan growth centers, of which there are seven in Iowa, for example, offer a range of choices in job, educational, and consumption opportunities that compare favorably with those in the larger regional centers. Because of the lack of correspondence between private and social costs, the smaller growth centers may grow less rapidly than the larger regional centers, although as a result the total social costs of urban growth may be greater than they would have been with less population concentration in the largest cities.[6]

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[5] The "growth pole" concept is discussed by Boudeville (*30, 31, 32*), among others, and it has been extensively applied in regional planning in France, Italy, and Holland (*6*). In the United States, the Economic Development Act of 1965 incorporates the growth pole concept in its reference to the "economic development center"—a city of less than 250,000 population, and typically more than 20,000, that would serve as a growth center for an "economic development district."

A third level of urban services focuses on the submetropolitan growth centers—the growth poles of multicounty rural economic areas. Referring to the Iowa geography again, nine submetropolitan growth centers have been identified; typically these centers provide the widest range of consumption choices of an urban place in the economic area, but still they are not fully competitive with the metropolitan growth centers, which are of higher order in the service hierarchy. In North Dakota, however, the sparsity of population dictates lower levels of population in the principal service centers and, at the same time, greater distance between these centers.

Finally, a fourth level in the service center hierarchy can be identified, namely, the local service centers, typically towns of 5,000 population, but ranging from 2,500 to as much as 25,000 population in areas with larger second- or third-level growth centers (*25-28*). Albia, Humboldt, and Dickinson in Iowa, for example, represent the fourth level of service centers. The local service centers provide an additional feasible settlement alternative for businesses and households within a functional economic area.[7]

Economic Linkages

The production linkages between the primary producing activities—agriculture, forestry and mining, and manufacturing—are illustrated by two types of studies covering the growing and the declining areas cited earlier, namely, studies of an area's economic base and studies of an area's interindustry transactions. While the first studies emphasize the commodity-producing activities, the second covers the entire range of economic phenomena. Because of the importance of community-producing activities in rural areas, both approaches to the understanding of rural economics are examined for the insights they offer regarding the role of public investments and services in regional economic growth and development.

Economic base

The main idea in the dichotomy between an exogenously determined and an endogenously determined activity is the direction of causation. Thus, for the economic base, events outside the area account for its growth and development while for the residentiary activities the success of the economic base in producing for and competing in profitable markets outside the area are of primary importance (*5*). Emphasis is upon external factors—technology and demand, and the adjustment of local activities to these factors via the export-producing sector (*186*). The adjustments are made by resource owners on the basis of their perceived investment opportunities in export-producing and related industries.

The underlying economic base rationale supports the Iowa studies focusing on three of Iowa's functional economic areas—TENCO, a 10-county area in southern Iowa; NIAD, a 9-county area in north-central Iowa; and Midcrest, an 8-county area in southwestern Iowa (*53, 54, 145*). In each of these studies, the emphasis is upon the commodity-producing or export-producing sectors of the area economy. Growth and development of the economic base in these areas is alleged to bring along with it growth and development in the area economy as a whole (*53, 54*). For example, the nine-county North Iowa Area Development area (NIAD) is projected to show a substantial decline in export-producing employment, which accounts for the lagging rate of growth in total employment (table 1). An increase in export-producing employment clearly would result in a substantial increase in total employment for the NIAD area.

The Iowa economic base studies are not intended to show the infrastructure requirements of each of the rural areas that would make feasible an expansion of commodity-producing or export-producing activities. These studies do show, however, that even by maintaining existing levels of employment in the commodity-producing or export-producing industries, the total number of jobs in the infrastructure and service industries would increase substantially. For example, in the NIAD study, the total employment supported per worker in the commodity-producing sector was 2.06 in 1950, but by 1975 this ratio is projected to reach 2.48. The 20-percent increase in non-commodity-producing employment per commodity-producing worker compares with a 23-percent increase in the ratio of

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[6] Private decisions, when based on currently favorable cost-benefit considerations, have accumulative effects on the degree and extent of urban congestion and environmental pollution that eventually become part of the individual decision matrix; however, these costs are transferred to future generations or, alternatively, they are borne by the entire community rather than proportionately by the economic units contributing to these costs. The "internalizing" of external effects of urban location decisions is one consideration underlying attempts to establish optimum-size, unified, general-purpose rural and metropolitan service districts.

[7] The "functional economic area," which is a phrase coined by Fox (*58, 59*) to describe the approximately 50-mile commuting zone centered on a principal urban center or what Philbrick (*144*) calls a "fourth order" central place, is essentially an economic development and planning area that can serve also as a multicounty, multipurpose service district; it corresponds with Friedmann and Miller's concept of the "urban realm" (*63*). The local service center is viewed, therefore, as the lowest-order central place in the functional economic hierarchy (*13, 14, 15, 40*). Smaller trade centers presumbaly would continue to decline and be replaced by a much smaller number of local service centers. Consequently, the local service centers would continue to grow until a more optimal organization of rural service systems is achieved.

TABLE 1.—*Estimated and projected export-producing and residentiary employment, by industry, NIAD Iowa, 1950–75* [1]

[Data in thousands]

Sector and industry	1950 Export [2]	1950 Domestic	1950 Total	1960 Export [2]	1960 Domestic	1960 Total	1975 Export [2]	1975 Domestic	1975 Total
Commodity producing:									
Agriculture	19.7	0.6	20.3	15.4	0.5	15.9	10.2	0.3	10.5
Manufacturing	6.0	1.3	7.3	6.6	1.5	8.1	8.8	2.2	10.8
Subtotal	25.7	1.9	27.6	22.0	2.0	24.0	19.0	2.3	21.3
Basic services:									
Construction	1.7	1.7	3.4	1.6	1.6	3.2	1.4	1.4	2.8
Transportation, communications, utilities	2.3	1.3	3.6	2.1	1.1	3.2	2.0	1.2	3.2
Subtotal	4.0	3.0	7.0	3.7	2.7	6.4	3.4	2.6	6.0
Secondary services:									
Trade	1.3	9.7	11.0	1.4	9.9	11.3	1.4	9.9	11.3
Financial, insurance, real estate	0	1.2	1.2	0	0.9	1.6	0	1.8	1.8
Business and repair	0.1	1.4	1.5	0.1	1.0	1.1	0.1	0.9	1.0
Entertainment and recreation	0	0.4	0.4	0	0.3	0.3	0	0.4	0.4
Personal	0.4	2.0	2.4	0.4	2.3	2.7	0.5	2.8	3.3
Professional and related	0.5	3.8	4.3	0.8	5.5	6.3	0.8	5.6	6.4
Public administration	0	1.4	1.4	0	1.5	1.5	0	1.7	1.7
Subtotal	2.3	19.9	22.2	2.7	22.1	24.8	2.8	23.1	25.9
Total	32.0	24.8	56.8	28.3	26.8	55.2	25.1	28.0	53.2

[1] Eldridge, Eber (*53*).

[2] Export-producing employment is that portion of an industry's total employment assumed to be engaged in the production of goods and services for sale outside the area.

residentiary to export-producing employment. However, deficiencies in basic and secondary services, insofar as these deficiencies may affect area industrial growth and economic development, are nowhere noted specifically with reference to their magnitude and the feasibility of correction through specific public programs and policies.[8]

Another consideration that is slighted in a sharply focused examination of an area's economic base is the spatial position of a focal point and its economic area in relation to the larger economic region of which they are a part. The growth and development of commodity-producing export industries in the area may induce growth of infrastructure and other service activities, or the residentiary growth may occur primarily because of the advantageous location of the focal point with reference to a large potential population that may seek residence in the area.[9]

Because of a "filling-in" process, new focal areas develop to serve core regions that previously were peripheral to the major centers of economic growth. For example, the dispersion of industrial plants from the Chicago area to more distant peripheral urban places has resulted in a surge of industrial growth in eastern Iowa. A concept of concentric zones of economic growth, based on spatial linkages, thus becomes applicable in the analysis of the future prospects for industrialization and accelerated population growth in rural areas (*143*, *157*).

Interindustry transactions

The standard input-output table yields much of the same information obtained from an economic base study. Using employment rather than gross output, an interindustry transactions table was prepared for a seven-county area (i.e., seven of eight counties making up the Midcrest area) in southern Iowa (table 2). This area is declining in population more rapidly than the NIAD area and it also has a smaller total economic base, in terms of the export-producing sectors, as compared with the corresponding sectors of the NIAD area. The interindustry transactions table provides a basis for estimating the manpower needs for the projected future industry in the area when the industry employment data are converted into corresponding projections of occupational profiles by industry and the area as a whole. Information on future manpower requirements and job opportunities are not available for most rural areas, which results in substantial gaps in developing area training and education programs that are geared to the future labor markets for the

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[8] Tang, in his studies of industrial-urban development in the Southern Piedmont (*182*), considered deficient public services a major roadblock to industrialization in labor-surplus areas. He therefore proposed (a) rapid amortization of private investment as an aid to industry and (b) supplementary Federal grants-in-aid as aid to local governments in the labor-surplus areas.

[9] The first position with reference to the export-producing sector is taken by North (*132*) when he asserts that the disposition of income earned from the export industries plays a decisive role in regional growth. Development of a successful agricultural export industry, for example, induces urbanization, as demonstrated by the agricultural development in the irrigated areas of the West. A strong export base, rather than urbanization, is the key to regional economic growth. Location factors are important, however, in the development of a region's urban structure as well as its export base.

TABLE 2.—*Employment requirements associated with specified interindustry transactions, southern Iowa, 1960* [1]

[Data in thousands]

Producing sector	Purchasing sector									
	Commodity producing		Basic services		Secondary services					
	Agriculture	Manufacturing	Construction	Tran., comm., util.	Trade	Financial, insurance, real estate	Other	Out commuters	Export	Total
Commodity producing:										
Agriculture	0.1	(2)	(2)	(2)	0.3	(2)	(2)	(2)	9.5	10.0
Manufacturing	0.1	(2)	(2)	(2)	0.1	(2)	(2)	(2)	0.7	0.9
Basic services:										
Construction	0.5	(2)	(2)	(2)	0.1	(2)	0.2	(2)	0.2	1.2
Transportation, communications, utilities	0.3	0.1	(2)	(2)	0.3	(2)	0.1	(2)	0.3	1.2
Secondary services:										
Trade	2.0	0.1	0.2	0.1	0.7	0.1	0.7	0.1	0.6	4.6
Financial, insurance, real estate	0.2	(2)	(2)	(2)	0.1	(2)	0.1	(2)	0	0.5
Other	1.9	0.2	0.2	0.2	0.9	0.1	1.1	0.2	0.7	5.5
Outcommuters	0	0	0	0	0	0	0	0	1.0	1.0
Total [3]	5.1	0.4	0.5	0.5	2.5	0.2	2.3	0.4	12.9	24.9

[1] Eldridge, Eber, and Julius, Marvin (*54*).

[2] Not more than 50.

[3] Columns may not sum to totals because of rounding.

area's labor force. Thus, the interindustry transactions table, when converted into corresponding estimates and projections of employment by occupation, can provide, for example, critical information for area manpower programs.[10]

A second interindustry transactions table—one covering a seven-county area focusing on Dickinson, N. Dak.—has been prepared for the calendar year 1960 (*153*). Thirty economic sectors were identified; these are regrouped now to correspond approximately to the classification presented earlier (table 3).

According to the findings of the Dickinson economic area study, based on the marginal multiplier estimates, a $1 million increase in the demand for each of the basic services shown in table 3 is associated with an increase in the total sales of goods and services in the Dickinson economic area of $1 million to $3.07 million, depending upon the particular industry that is experiencing the increase in demand. Of course, growth in market demand in one sector in the infrastructure is not an independent phenomenon but part of an overall area increase in the demand for goods and services produced by all the industries that are linked together by their interindustry sales and purchases. A $1 million increase in the final demand for transportation, for example, would be associated, but not necessarily on a cause-and-effect basis, with a substantial increase in the demand for communication services as well as public utilities, housing, streets and roads, schools, and other public facilities.

An interindustry transitions table was prepared for Iowa as a basis for long-run resource and metropolitan planning in the State (*10*). According to the Iowa studies, in 1960 total State and local governmental expenditures on highways, education, welfare, and related public services was $886 million while total population and employment was 2,758,000 and 1,019,000, respectively. Total commodity-producing employment was 412,700—slightly over 40 percent of total civilian employment. If total employment were to increase to 1,117,000 by 1975, and total output of the commodity-producing sector were to increase from $4.3 billion to $7 billion in constant 1960 dollars, total current and capital outlays for the specified public functions would increase from $1.2 billion to $1.8 billion, in constant 1960 dollars (table 4). Thus, each $1 billion in-

TABLE 3.—*Gross receipts multipliers based on regression and trade coefficients, Dickinson area, N. Dak., 1960* [1]

Industry	Marginal multiplier [2]	Average multiplier [3]
Commodity producing:		
Agriculture, crops	3.02	3.56
Agriculture, livestock	3.27	4.16
Concrete, sand, gravel, etc.	2.53	2.98
Basic services:		
Construction	1.43	2.46
Transportation	1.00	3.02
Communications	3.07	3.38
Utilities	1.28	2.30
Secondary services:		
Elevators	3.92	4.24
Livestock marketing	1.00	3.63
Food and kindred products	1.95	2.92
Restaurants and bars	2.23	2.96
General merchandise	1.45	1.80
Furniture and appliances	1.44	1.89
Drugs and medicine	1.00	2.31
Petroleum	1.33	1.72
Cars and trucks	1.36	1.63
Machinery	1.23	1.69
Lumber and hardware	1.65	2.07
Insurance	2.24	3.51
Legal and financial	2.85	3.72
Local housing	2.68	3.63
Auto and machinery repair	1.53	2.32
Personal services	2.73	3.28
Recreational facilities	2.48	2.90
Service and charity	2.99	3.66
Medical services	3.04	3.34
Medical facilities	3.04	3.58
Churches	2.69	3.17
Government	1.00	1.00
Households	2.37	3.13

[1] Sands, Larry Dean. *Analysis of effects of income changes on intersectoral and intercommunity economic structure.* Unpubl. Masters Thesis, Library, N. Dak. State Univ., Fargo, 1966, p. 39.

[2] Based on regression analysis of change in purchases of an industry associated with reported changes in gross receipts.

[3] Based on total area interindustry purchases and sales.

TABLE 4.—*Estimated and projected per capita current and capital outlays, in constant 1960 dollars, by sector and function, Iowa, 1960 and 1975* [1]

Section and function	Current outlays 1960	Current outlays 1975	Capital outlays 1960	Capital outlays 1975
Government:				
Education	$109	$187	$14	$25
Highways	84	102	54	63
Welfare	25	30	3	3
Other	128	174	21	28
Total	$346	$493	$92	$119
Industry:				
Commodity-producing	$2,806	$4,170	$131	$176
Noncommodity-producing	1,911	3,829	119	150
Total	$4,717	$7,999	$250	$326
Household	$1,675	$2,152	$320	$428

[1] Based on data presented in Barnard (*10*).

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[10] The critical role of the labor market in transforming agricultural enterprise in low income rural areas into more productive economic units has been cited by Nicholls (*127–131*), Ruttan (*152*), Schultz (*158–161*), Sisler (*171*), and Tang (*181, 182, 183*). A distance factor affects the quality and availability of information on job opportunities, however, as pointed out by Smith (*174*). Indeed, Meier (*116*) considers the production, distribution, and use of information as a key function of a city and particularly, a city's central business district. Quite possibly, the role of information in economic development—both its production and consumption—is the most seriously neglected facet of the otherwise excellent studies conducted in light of the brilliant insight into area economic development offered by Schultz (*157*) nearly two decades ago.

crease in the gross output of the commodity-producing sector, according to this study, would be accompanied by a $160 million increase in State and local expenditures.

Focalization of Basic Services

The focalization of basic services in the major urban centers was mentioned earlier in the comparison of rural infrastructure. For example, 31 percent of the 1960 employment in basic service industries in the Ottumwa economic area (TENCO) reside in Ottumwa and the remainder of Wapello County (table 5). Because of commuting, however, the employment percentage underestimates the concentration of basic service jobs in the focal area. Secondary service industries, similarly, are con-

TABLE 5.—*Percentage distribution of employment in selected economic areas in Iowa, by industry, 1960* [1]

Industry	Ottumwa area		Ft. Dodge area		Waterloo area	
	Focal county	Total	Focal county	Total	Focal county	Total
Commodity producing:						
Agriculture, forestry, fisheries	8.2	25.4	14.1	26.8	5.4	23.0
Mining	0.2	0.8	0.3	0.2	0.2	0.2
Manufacturing	31.7	18.3	25.8	16.2	36.6	22.2
Total	40.1	44.5	40.2	43.2	42.2	45.4
Basic services:						
Contract construction	5.0	5.3	4.6	5.0	4.9	5.0
Transportation, communications, utilities	9.0	6.8	6.4	6.2	6.5	6.0
Total	14.0	12.1	11.0	11.2	11.4	11.0
Secondary services:						
Trade	20.1	19.1	21.2	20.8	19.8	19.1
Financial, insurance, real estate	3.1	2.4	3.4	2.8	3.2	2.8
Business and repair	7.4	7.2	7.6	7.1	7.4	6.8
Professional	12.3	11.6	13.6	11.6	13.3	12.2
Public administration	3.0	3.1	3.0	3.3	2.7	2.7
Total	45.9	43.4	48.8	45.6	46.4	43.6
All industry	100.0	100.0	100.0	100.0	100.0	100.0

Industry	Cedar Rapids area		Mason City area		Creston area	
	Focal county	Total	Focal county	Total	Focal county	Total
Commodity producing:						
Agriculture, forestry, fisheries	5.8	16.4	12.6	30.8	25.9	39.0
Mining	0.1	0.2	0.3	0.2	(2)	0.3
Manufacturing	37.7	24.5	19.4	13.7	7.0	5.5
Total	43.6	41.1	32.3	44.7	32.9	44.8
Basic services:						
Contract construction	5.2	5.0	6.5	5.6	6.4	4.9
Transportation, communications, utilities	6.1	5.1	7.5	5.4	10.5	5.6
Total	11.3	10.1	14.0	11.0	16.9	10.5
Secondary services:						
Trade	19.4	18.6	24.7	20.2	23.2	18.8
Financial, insurance, real estate	4.4	3.2	3.7	2.8	3.0	2.2
Business and repair	7.7	7.4	9.2	7.6	8.1	6.9
Professional	11.3	17.1[3]	13.3	11.2	11.3	13.1
Public administration	2.3	2.5	2.8	2.5	4.6	3.7
Total	45.1	48.8	53.7	44.3	50.2	44.7
All industry	100.0	100.0	100.0	100.0	100.0	100.0

[1] Based on U.S. Census of Population data.

[2] Less than 0.5 percent.

[3] Includes University of Iowa personnel which are part of the area's export base and comparable to the commodity-producing industries in other areas.

centrated in the local counties of the functional economic areas. Much of the remaining area infrastructure that is located outside the major urban center is concentrated in a few intermediate urban places that function as subsidiary service centers.

Industry location decisions

Investment in social overhead is a prerequisite to industrial development in an area, but continued industrial development results in both social and private costs that inhibit further industrialization and contribute, instead, to the dispersion of new industrial plants to peripheral areas. Thus, generally, industry has moved from the central business district to the suburb and from the suburb to outlying centers (*29, 65, 207*).

The waves of industrialization emanating from major metropolitan centers eventually coalesce along their respective peripheries (*196, 197*). If another urban center exists in the area of coalescence, the services and amenities offered by this urban center may attract some of the industry and commerce seeking the peripheral location within one of the metropolitan areas. Subsequent proliferation of service activities, expansion of infrastructure, and provision of additional amenities make the new urban center an increasingly attractive place in which to live. Growth of new job opportunities in the urban center for residents in the surrounding areas contributes to higher per capita earnings for those who can take advantage of the consequences of the local industrial and business growth (*3, 31, 55, 60, 180, 199*).

Two important processes are at work in making the peripheral urban center a focal area for industrialization and commercial development, namely, the dispersion of industry from major metropolitan centers experiencing the problems of urban congestion and the high cost of access to urban amenities, and the coalescence of the dispersive movement from several major metropolitan centers in the vicinity of an existing urban center—a center that can respond to the emerging needs of the peripheral plants and labor force through additional public investments in social overhead and amenities. Many of the new industrial plants and business establishments are branch plants or offices and, therefore, have access to pools of skilled labor, managerial talent, and risk capital in one or more of the major metropolitan centers. At the same time, the existing urban center serves as a competing and more convenient source of labor, including technicians and supervisory personnel, and of financing.

Industrial development in the growth center eventually may result in rapidly increasing private as well as social costs that encourage both industry and workers to seek peripheral areas, but within commuting distance of the principal urban center. Thus, smaller urban places in the surrounding area must face the same sorts of public investment choices that were faced earlier by the leaders of the larger urban center. For some of the smaller peripheral places the choice may be not to expand the local infrastructure but to curb the additional costs of investing in new schools and other public facilities, especially when these higher public expenditures would be associated with higher private expenditures. Indeed, local wage and salary levels may rise, but the incomes of many of the local residents would be fixed, which would impose the threat of a "developmental squeeze" upon an influential part of the local community. The local power structure may work, therefore, to exclude new industry and business from their community because of the threats imposed upon established living patterns (*87, 195*).

Some of the peripheral rural trade centers may not be dominated by a scarcity economics but, instead, the rural leaders may be expansion-minded, perhaps because of successful farming experience and increasing agricultural assets. Power structures in these rural communities may favor industrialization as a means of reducing individual tax loads and, also, providing job opportunities for young people within commuting distance of their present homes. In such rural communities public investments may be made willingly.[11]

Agglomeration economies

Increasing specialization is made possible as the urban center grows and becomes the focal point for several smaller trade centers and the population residing in these trade centers and in the open country. The organization and structure of the service industries depends, however, on the size and ownership of the producing units. Large-scale organizations, with headquarters in distant metropolitan centers, typically provide their branch plants with a variety of professional and business services that would be acquired locally by small-scale enterprise. Thus, urban areas characterized by a large number of small, locally owned businesses tend to be characterized, also, by a relatively large number of service establishments. The contribution of the social overhead in providing a climate for profitable private investment opportunities, therefore, depends upon the scale and type of economic organization, particularly in the basic industries.

The agglomeration economies that have been cited thus far pertain to dissimilar economic units that are complementary, however, in their economic function. A certain minimum size of economic base and population support is needed to provide sufficient clientele for a competitive local service activity (*76, 187, 188, 189*). Agglomeration complementaries exist, also, among similar economic units —for example, among clothing stores. Stores will tend to bunch together simply because larger numbers of shoppers will be attracted to each store in search of exactly the kind of product that best suits the tastes and budgets of the shoppers. Because the shopping center is large enough to support several economic units offering a similar product or service, it is possible to offer a wider range of choices than would be available at a single shop located in a smaller trade center.

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[11] Established rural families, as pointed out by Olson (*134*), hold "capital value" in community status; hence, an additional factor that could contribute to a community development attitude among successful businessmen is the realization that a positive, developmental approach to community problems must involve not only higher tax and wage rates, but also an area-wide orientation that envisions a broader role for the rural growth center than simply being another local service center catering to a small open-country population.

Finally, agglomeration economies are involved in the favorable location advantages of large urban centers that attract a wide range of human skills and competences and financial resources (*16*). Many rural areas are incapable of supporting a sufficiently large population base that would attract highly specialized service and professional businesses on the one hand, and on the other, technically educated and motivated workers. A business enterprise seeking a location in a rural area first must assure itself that each job opening has several applicants and that each new investment opportunity has several sources of financial support. Little is known about the threshold levels for business enterprise, although some studies show that an optimal city size may be attained with no more than 200,000 population. A submetropolitan growth center that serves as the single center for the specialized requirements of an economic area of 200,000 population could be viewed, therefore, as low-density city with its "suburbs" extending 50 miles or more from its central business district.[12]

Public Service Systems

Because accumulative processes, such as population outmigration, are disequilibrating, public programs of rural industrialization have been proposed as an alternative to area depopulation and the consequent erosion of rural institutions (*85, 175*). Accompanying the programs of rural industrialization are the public investments in social overhead, and the related public service systems, that would induce additional private capital formation to meet the emerging demands for locally produced goods and services. Where a potential exists for developing an expanding private sector, the public investment would have multiplier effects upon the area economy because of the future location decisions of both households and businesses.

Production-Income Linkages

A combination of favorable household and business location decisions results in a growth process that feeds upon itself and that provides an increasing range of choices, not only in jobs for young people, but also in opportunities for education, recreation, cultural enrichment, and material advancement. The changing occupational mix, and the related investment in the human agent, are the primary influences contributing to higher earnings per worker and a broader distribution of area income (*44, 136, 162, 165, 166, 167*).

Investment in the human agent is not confined solely to schooling (*12, 82, 201*). It includes, also, the public expenditures in health and welfare services and in employment counseling services. All of these expenditures can be justified, however, by their contribution to economic growth that is manifested in improved levels of productivity and higher earnings among those benefited by the public expenditures (*125, 202*). Indeed, arguments supporting aid to dependent children, vocational rehabilitation programs, vocational training and job retraining, public health, and Medicare, physical therapy and mental health centers, accident prevention, and other programs are based on their benefits to young people and others in the productive age groups by improving the capabilities of present and future members of the labor force in taking advantage of opportunities for job advancement and remunerative employment (*98*).

Occupational profiles

The occupational profile links the economic base of an area to its pattern of income distribution. The occupational profiles in dominantly rural areas are influenced by their peripheral relation to the major national population agglomerations. Typically, the proportion of clerical workers and operatives in Iowa export industries, for example, is above national averages while the proportion of technical and professional personnel and sales workers is below national averages. However, the accurate estimation and assessment of occupational requirements of industries that offer job opportunities for rural people depend on more detailed information than available from existing census data sources (*7, 8*).

For small firms a major limiting factor is an insufficiently large pool of skilled labor to allow for gradual adjustments of a plant's labor force to changing product and job specifications. A metropolitan area labor force typically offers many more options to a prospective small employer than the smaller and less diverse labor force in a rural area. However, a large business with a national headquarters in a major metropolitan center has the capability of quickly training a local labor force for the many routine jobs in its specialized branch plants.[13]

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[12] The spatially extensive service functions of cities above 10,000 population in dominantly rural-agricultural areas is contrasted with the spatially-intensive service functions of corresponding urban places in dominantly urban-industrial areas in a study of the industrial structure of American cities by Alexanderson (*2*).

Expansion of public services implies a widening range of occupational choices for an area's labor force, but the range of choices will vary depending upon the size of service centers. For low-order centers, new job opportunities are few and mostly for male workers. For high-order centers, job opportunities are more numerous, particularly for women, and the educational attainment of the local labor force is greater. Although a higher rate of employment of women tends to lower the average earnings per worker, higher educational levels generally are associated with higher earnings per worker. Because the employment of women reduces dependency ratios, family income levels increase for the focal center and for the area as a whole.

Income distribution

Area income levels vary primarily because of variations in the occupational composition of area employment.[14] Once median income levels for specific occupations are adjusted for the degree of underemployment and excess labor supply, the remaining source of interarea variability in income can be attributed primarily to an area's demographic and occupational mix (*38, 57, 71, 75, 86, 117, 118, 119, 121, 147, 190*). Thus, median family income levels are higher in the growth center than the local service centers largely because of a higher proportion of professional, managerial, and related occupations with high earnings per worker.

In declining areas a circle of economic and cultural poverty becomes established because of low incomes and limited opportunities (*24, 35*). These areas lack an adequate market to support a variety of service industries, which, in turn, reinforces the economic and cultural poverty of the area. Oftentimes the expansion of the local economic base is viewed as less desirable than improvement of access to essential social services. As long as the new entrants into the labor force acquire the attitudes and skills to compete successfully with their metropolitan counterparts, and as long as job opportunities are available elsewhere, then the provision of essential social services rather than promotion of local industrialization exists as a potentially more desirable policy choice.

Rural migration

Through the migration process, surplus labor areas achieve higher per worker earnings and thus a redistribution of total income (*18, 91, 135, 173, 198*). If total output is unaffected by the outmigration, only one major variable in the production-income equation is changed significantly, namely, total population (which results in a higher income-population ratio). Seldom, however, is change confined only to one area variable as a result of migration. Both direct and indirect production and consumption effects are triggered by population outmigration.

From a local service area viewpoint, population outmigration increases per capita costs of local public services, but it also may increase per capita revenues of local governmental units when the rural migrants fall below the average levels of income and tax assessments (*108*). Typically, migrants, like poor families, depend upon jobs that require below-average skills and offer below-average earnings prospects (*34, 72, 80, 93, 109, 114, 151, 172, 174*).

From a combined growth center and economic area viewpoint, rural-to-urban migration results in demands for additional local-area urban services. (At the same time, excess supplies of similar services occur in the originating local service areas.) An increase in short-run public service requirements presumably is associated with compensating effects on the area's tax-generating capabilities because of the transfer of resources from a labor-surplus to a labor-deficit area. If the compensating public revenue effects are not achieved because of the persistence of chronic unemployment conditions (i.e., lack of job opportunities or, conversely, lack of needed skills and training), then a net additional burden results from the interarea population shifts (*11, 42*).

An intervening educational and training phase in the migration process would facilitate an upgrading of the area's occupational structure. Corresponding adjustments in the level or mix of local industry would be necessary as an inducement for area-supported educational and training institutions to engage in the manpower development process. Alternatively, a system of grants-in-aid to the growth center and the economic area would offer a means of compensating area property owners and taxpayers for the additional public costs incurred in the education and training of those who must seek jobs outside the area. The upgrading process again would result in a short-run rise in the unit costs of area-wide public services.

Income profiles, because of their relation to occupational profiles, will change as a result of changes in an area's occupational composition. Though occupational profiles may be fixed, shifts in local distribution of industry result in corresponding shifts in the overall distribution of occupations. Indirect income effects associated with the migration process may be negligible because of lack of change in either production or consumption functions in the area. If capital intensification occurred, the reduction in surplus labor could lead to improvements in area resource productivity as a result of a transformation of production techniques. The higher earnings associated with greater output per worker would result eventually in shifts in consumption patterns and in local trade and service employment.

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[13] Reports of new plant locations in trade journals and publications reveal a strong preference among national companies for locating branch plants in cities of 25,000 to 50,000 population, particularly in areas offering favorable living conditions. Local manpower requirements for those plants are handled adequately through in-plant training programs.

[14] According to a recent study by Laurie D. Cummings reported in the *Monthly Labor Review* (Vol. 88, No. 7, July 1965), the employed "poor," i.e., heads of families with less than $3,000 income in 1963, are dominantly operatives and kindred workers, service workers, laborers, and farmers. Rural areas generally have a disproportionate share of these low income occupations (*36*).

Area development options

Area industrial development is influenced by an area's manpower options and market prospects. When a prospective employer, especially a small businessman, has only one qualified candidate for a job vacancy, he may hesitate locating in the area. Similarly, the lack of well-established and progressive financial institutions is a potential deterrent to area industrialization. Local savings may be insufficient to support a substantial volume of small business and residential loans. Because of low area income levels, moreover, family resources may be inadequate to provide high school graduates with additional opportunities for advanced training or higher education.

Increases in per capita levels resulting from increases in the proportion of high-income families are not necessarily conducive to future industrialization. Lack of sufficient consumption choices locally may encourage the high-income families to trade elsewhere and, perhaps, to participate extensively in the wider range of activities at the nearest metropolitan center. The low income families would present essentially the same low level of market and manpower prospects as before. Thus, the industrial development choices offered by a declining rural area to a wide range of businesses would be constrained by the structural deficiencies in the economic environment for maintaining an adequate local infrastructure and service sector.

Consumption-Income Linkages

Of basic importance to both community and industrial development are linkages between personal income levels and consumption patterns. Widespread shifts in income distribution affect local household demands and, subsequently, public management decisions. For example, interstate highways could be located primarily in terms of emerging consumer choices in outdoor recreation. The consumer orientation would be dominant, particularly if all households were to obtain sufficient income supplements to eliminate the so-called poverty gap—the difference between actual income and prescribed minimal income levels—and if migration or retraining subsidies were available to facilitate a worker's adjustment to a changing job situation (*137, 138, 184*).

Consumption options

Because of the importance of the proximity criterion (i.e., client preference for obtaining frequently needed services from the nearest service center or service establishment) in consumption choices and in accounting for the concentration of particular public services, the local service centers might be viewed as "building blocks" in a system of rural service centers and service areas. The local service centers would represent the focal point for producing, purchasing, and distributing the public services responding primarily to a proximity preference criterion; the local service facilities might include primary and secondary education, farm-to-market roads, local welfare offices, and local health centers (*4, 21, 40, 94-97, 194*). High-order public services, such as area vocational training and manpower development activities, specialized medical services, employment counseling, and related professional services, are associated with a high scale or quality preference; they are more economically obtained at the larger growth centers (*169, 185*).

The two sets of public services are differentiated technically by their income-elasticity coefficients. A low income-elasticity coefficient is associated with a high proximity preference while a high income-elasticity coefficient is associated with a high scale preference (in a sense, "quality" rather than "quantity" of service). The proposed public service systems might be organized on a functional basis, but the use of common boundaries in the management of these public services would facilitate and even encourage interunit comparisons and transfers. Eventually, therefore, prospective residents of the service areas could acquire sufficient information to compare the benefits and costs of living in any one of the areas. Thus, each local service center in an economic area would represent a settlement alternative; these alternatives could be compared, not only within a rural area but between a rural area and a metropolitan area.

In terms of household income levels, the local service center offers those services sought particularly by low income families, of which a large proportion reside in the local service centers and surrounding areas. Finally, both the local service center and the growth center have ties with one or more regional centers that cater to the needs of large multiarea regions (*69*). Thus, four levels of service centers can be identified, with each level being characterized by the range of goods and services available at these centers, as well as by the related clientele and population support (*20, 33, 47*).

Service districts

Public services in rural areas are concentrated typically in a small fraction of the population centers.[15] Between 1952 and 1962, for example, substantial school consolidation in the NIAD area reduced the number of local government units from 420 to 110. School districts declined from 337 to 36 in the NIAD area during the specified period.

Rural areas characteristically depend upon property taxes for their major source of revenue. From 53 to 66 percent of the local and government revenues for the NIAD and Midcrest areas, for example, were local taxes (*204, 205*). In the future, however, intergovernmental transfers, which exceeded a quarter of a billion dollars in Iowa in 1960, are expected to rise substantially as a result of property tax relief and State and Federal grants-in-aid to local school districts.

Expenditures of local and county governments in 1961 are summarized, by function, to illustrate the overwhelming importance of health, education, welfare, and highway services in the structure of local and State government (table 6). Generally the per capita expenditures for State and local government are higher in rural areas than in metropolitan areas (table 7). Added to these public expenditures are the Federal allocations for higher education, welfare, highways, and related areas. Altogether, State, county, and local government expenditures in 1961 totaled $337 per capita in Iowa as compared with $428 in the NIAD area and $463 in the Midcrest area. Under conditions of rapidly rising income levels, State and local expenditures per person are likely to increase in both growing and declining areas.

With the rationalization of public management systems in rural areas, the intermediate level of public services—those localized in the growth centers—would experience substantial expansion because of the realization of scale economies in their production and distribution. Functional specialization would occur, also, in the production of public services, with some services, such as water and sewerage, along with parks and recreation, for example, being provided by the community development districts rather than the local service districts.

An estimate of the scale economies feasible through a reorganization of public services requires study of the unit costs of specified services for different sizes of service units under alternative growth conditions (*37, 50, 51, 73, 74, 81, 90, 105, 112, 142, 154, 155, 169, 170*). Findings of recent studies of governmental costs in Colorado and Iowa illustrate, in gross terms, the magnitude of the cost differences for growing and declining areas (table 8). These data need elaboration, however, to support the case for multicounty service districts as a necessary development for reducing per capita costs of local, county, and State governments.

Recent Iowa legislation illustrates the scope of State enabling laws for establishing unified area

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[15] For example, in Iowa the 16 focal counties (i.e., counties in which area growth centers were located) accounted for 45 percent of the total Iowa population in 1960. The focal counties with growth centers of more than 50,000 population accounted for 33 percent of the total 1960 population. Iowa population projections for 2020, which are based on essentially the Series II national population projections for 1980 and related Iowa series (*46*), show the focal counties accounting for 60 percent of the total projected population, while the metropolitan counties account for 42 percent of the total projected population.

TABLE 6.—*Average per capita local, county, and State expenditures in Iowa, and nondefense expenditures in U.S., by public function, 1961* [1]

Public function	Per capita				Proportion of total			
	Local	County	State	Federal	Local	County	State	Federal
	Dollars	*Dollars*	*Dollars*	*Dollars*	*Percent*	*Percent*	*Percent*	*Percent*
Education	100.77	1.52	30.84	3.22	67.2	3.0	22.8	2.2
Highways	12.38	25.39	37.82	0.81	8.2	49.8	28.0	0.5
Welfare	0.01	5.95	21.14	0.34	(2)	11.6	15.6	0.2
Health and hospitals	2.48	5.48	11.68	9.65	1.6	10.7	8.6	6.5
Police protection	4.59	0.96	21.35	1.05	3.0	1.9	15.8	0.7
Fire protection	3.69	0.01	.....	.....	2.4	(2)	.....	.....
Sewerage	7.66	0.01	.....	.....	5.1	(2)	.....	.....
Sanitation	1.99	0.01	.....	.....	1.3	(2)	.....	.....
Parks and recreation	3.50	0.10	.....	.....	2.3	0.2	.....	.....
Natural resources	0.45	2.12	4.46	58.24	0.3	4.2	3.3	39.0
Correction	.....	0.33	2.21	0.27	.....	0.6	1.6	0.2
Libraries	1.55	0.09	0.09	.....	1.0	0.2	0.1	.....
Financial administration	0.65	2.87	1.78	3.45	0.4	5.6	1.3	2.3
General control	1.97	3.08	0.73	1.12	1.3	6.0	0.5	0.8
General public buildings	0.69	1.09	0.37	.....	0.5	2.1	0.3	.....
Interest on general debt	4.15	0.14	0.48	38.54	2.8	0.3	0.4	25.9
Other	3.85	1.97	2.31	32.39	2.6	3.8	1.7	21.7
Total	150.38	51.12	135.26	149.08	100.0	100.0	100.0	100.0

[1] Based on data in 1962 Census of Government.

[2] 0.05 percent or less.

Table 7.—*Local and county government expenditures, NIAD and Midcrest area, 1961*

Area and public function	Expenditures				Employment per 10,000 inhabitants	
	Per capita		Proportion of total			
	Local	County	Local	County	Local	County
	Dollars	*Dollars*	*Percent*	*Percent*	*Number*	*Number*
NIAD area:[1]						
Education	121.72		52.9		183	
Highways	44.17	30.60	19.2	48.2	27	20
Welfare	5.42	6.50	2.3	10.2		2
Health and hospitals	10.51	8.75	4.5	13.8	15	6
Police protection	4.50	1.01	1.9	1.5	7	1
Fire protection	2.36		1.0		3	
Sewerage	9.75		4.2		4	
Sanitation	1.42		0.6			
Parks and recreation	2.13		0.9			
Natural resources	3.73	3.44	1.6	5.4		
Correction	0.26	0.26	0.1	0.4		
Libraries	1.77		0.7			
Financial administration	3.43		1.4		9	6
General control	5.32	6.63	2.3	10.4	8	6
General public buildings	1.49	0.97	0.6	1.5		
Interest on general debts	4.65	0.34	2.0	0.5		
Other	7.13	10.88	3.8	8.1	18	2
Total	229.85	63.38	100.0	100.0	274	43
Midcrest area:[2]						
Education	103.83	2.33	46.4	2.2	172	
Highways	59.87	54.03	26.7	51.0	50	46
Welfare	6.29	8.25	2.9	7.8		3
Health and hospitals	16.16	23.52	7.7	22.2	38	42
Police protection	3.35	1.49	1.6	1.4	7	2
Fire protection	0.74		0.4		6	
Sewerage	5.51		2.8		9	
Sanitation	0.22		0.1			
Parks and recreation	1.13		0.5			
Natural resources	2.52	2.19	1.1	2.1		
Correction	0.18	0.20	0.1	0.2		
Libraries	0.72		0.3			
Financial administration	4.32		1.9		11	10
General control	5.78	9.13	2.6	8.6	8	7
General public buildings	1.36	1.19	0.6	1.1		
Interest on general debts	2.82	0.25	1.3	0.2		
Other	6.84	3.42	3.0	3.2	15	6
Total	221.64	106.00	100.0	100.0	316	116

[1] Wiggans, C. W. (*204*).
[2] Wiggans, C. W. (*205*).

Table 8.—*Estimated per person costs of specified public services, Colorado and Iowa*

Item	Declining counties	Growing counties
Colorado (State and local):[1]		
Education	$151	$138
Health and hospitals	23	4
Welfare	62	29
Total	355	247
Iowa (county only):[2]		
Total:		
1940	22	15 ([3])
1960	91	31 ([3])

[1] Hartman, L. M., and Seastone, D. A. (*78, p. 223*).
[2] Wessel, Robert. "Iowa County Governments To Face Different Problems." *Iowa Farm Science*, Feb. 1963.
[3] Metropolitan counties. Estimated costs for stable population counties were $19 and $67, respectively, in 1940 and 1960.

service systems.[16] First, multicounty metropolitan planning commissions are authorized (Ch. 473A of the 1966 Iowa Code) with "the power and duty to make comprehensive studies and plans for the development of an area it serves which will guide the unified development of the area and which will eliminate planning duplication and promote economy and efficiency in the coordinated development of the area and the general welfare, convenience, safety and prosperity of its people." Second, the establishment of multischool district areas is authorized (Ch. 280A of the 1966 Iowa Code) for the purpose of operating area vocational schools and area community colleges, which have taxing as well as administrative powers (*52*). Third, the consolidation of hospital services is authorized (Ch. 135A of the 1966 Iowa Code) for all Iowa counties having a population of 135,000 or more in which there is a city having a population of 125,000 or more. Additional enabling legislation has been passed, but no State law yet provides for consolidated multipurpose public service districts (*22*).

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[16] In a 1963 report of the Advisory Commission on Intergovernmental Relations, *Performance of Urban Functions: Local and Areawide*, a series of economic and political criteria are presented for determining the optimum jurisdiction for handling urban functions, which are applied in an evaluation of urban functions. The commission's study focuses on the question: What is the optimum size area for providing a given urban service? It views the metropolitan center as the focal point for areawide planning and considers agreement on areawide goals as the basic requirement for areawide action, regardless of how many local governments or administering agencies may exist.

The public service districts provide a "package" for the public goods produced by the districts. These districts are large enough to realize economies of size in producing or distributing particular public goods, and the boundaries of the district would include all the beneficiaries of their services. However, institutional innovations are needed to assure a responsiveness of the district managements to appropriate political interests. Local citizens representing a wide range of businesses and of consumers of public services would need to be involved in the policy decisions on criteria of control, efficiency, and political representation (*139*).

Thus, the economic area, rather than a subarea such as a single municipality or county, would become the geographic "package" for the production of public services, the cost and benefits of which would be measurable in terms of the entire area population. The institutions and resources for effectively organizing productivity on an area scale would focus on the area's growth center as an integral part of a system of growth centers. A principal function of the growth center is facilitating access to essential production inputs and to market outlets that warrant private investment in an area's productive capabilities. Another principal function of the growth center is facilitating access to a widening range of consumption choices, which, in an age of national affluence, become a major concern of a growing proportion of our population. Again, the organization of productivity and of amenities is a primary function of an area's infrastructure.

Growth, Development, and Investment

When economic growth is measured in terms of output, most commercial agricultural areas are growing, even though the agricultural labor force and farm population are declining. Growth in output is a function of the growth in labor force and output per worker. However, as long as the growth in output per worker exceeds the growth in total output, the labor force is, by definition, declining. Thus, economic growth can be accompanied by a reduction in area population, as long as output per worker is rising more rapidly than population is declining. On the other hand, if economic growth were measured solely in terms of an increase in the total labor force, then the output expansion must exceed the increase in output per worker or, alternatively, the growth in demand must exceed the rising productivity of resource inputs.

By introducing the concept of productivity (i.e., increasing output per worker involved in a production process), we focus on development rather than simply growth. Development involves, in addition to the impact of technology upon local resource productivity, shifts in consumer tastes and demand (*32*). Along with increasing output, therefore, is a corresponding increase in consumption.

Consumption shifts are a function of changing population and of changing consumption per capita or, alternatively, of changing income and changing quantities consumed per dollar of income. Just as increasing production per worker can be associated with a change in technology, increasing consumption per person can be associated with a change in income and tastes.

Production of Goods and Services

The production emphasis focuses on the input-output relation and the increases in input associated with corresponding increases in output. The increases in inputs—labor, capital, and raw materials—can be attributed to the changes in the social-economic environment, for example, amenities and information.

Production relations

A progressive technology accompanies improvements in capital inputs. Improvements in capital inputs anticipate an upgrading of labor skills through more efficient utilization of new machinery and techniques (*17, 168*). However, capital improvements involve private investment with the anticipation of future earnings (*70, 120, 123*).

For a growing area, future expectations of market expansion are mutually reinforcing. For example, the risk capital and managerial talent needed to ferret out potential investment opportunities and to profitably utilize the available financial resources are likely to concentrate in the focal center of the growing area because of its superior access to relevant business information. Thus, perceived day-to-day and long-run business opportunities at the focal center are likely to exceed the perceived business opportunities in peripheral locations. Consequently, economic development occurs more readily at the center than in the periphery, except in the peripheral areas that have strong ties to focal points elsewhere—for example, a distant metropolitan center (*61, 62*).

A peripheral area may have a unique resource base which is being developed by organizations outside the area (*65, 89*). Alternatively, export businesses in the peripheral area may deal directly with regional and national markets, bypassing the intermediate product markets in the economic area's growth center. Eventually, however, if a stable and productive resource base exists, the employment in the export industries will trigger a series of increases in local investment, particularly in the infrastructure.

A focal center may develop in the peripheral area to better service the export base by improving industrial access to product, labor, and capital markets. Of the three, the labor market is viewed as a primary institution for propagating the multiplier effects of increasing productivity in an area's economic base. When local employment opportunities are lacking, however, the relevant labor market extends beyond the commuting zone of the area's growth center and focuses, instead, upon a more distant growth center. Thus, a center-periphery dichotomy in an area's settlement system complements an export-residentiary dichotomy in an area's industrial makeup in explaining the spatial propagation and diffusion of economic growth.

Market organization

Quasi-market institutions are being used in the transfer of public goods from large metropolitan areas to smaller governmental jurisdictions (*139*). Transfer prices are being negotiated that provide the smaller areas with essential public services at costs lower than attainable by the smaller areas if they were to produce these services. Also, one area may join with another, and indeed with several areas, to support joint sewerage treatment and water works facilities, and vocational training schools and health centers, as illustrated by the legislation recently enacted in Iowa. Different areas can specialize in the production of different public services on the basis of intergovernmental agreement. Dollars, rather than people, would be "voting" for the desired public and private service mix.

Voting systems, whether economic or political, are extremly cumbersome institutions for establishing the value of public goods, especially when the amount and quality of both the needed information and the decision-making based on the information are extremely high. It is quite possible that, with regard to some public services, economy is best achieved not by market or quasi-market institutions, but through the application of problem-solving techniques and the bargaining process.

Growth centers and local service centers in the rural areas of the nation also may find intergovernmental coordination and exchange less satisfactory than a functional consolidation of selected facilities —for example, municipal water and sewerage systems and law enforcement agencies. Moreover, the local service centers, and the population residing in the vicinity of these centers, could acquire a large proportion of the essential public services from the submetropolitan growth center. The multicounty consolidation of governmental functions makes possible the spreading of the rising costs of these services among a much larger total population, which would serve as a primary incentive in functional consolidation. The consolidation of local governmental functions is, therefore, an alternative approach to county consolidation in achieving scale economies in the production of public services.

Amenities and Community Development

The growing importance of consumption considerations in the location of economic activity is a motivating factor in emphasizing the role of the infrastructure in enhancing the natural amenities of rural areas. Open space and outdoor recreation facilities oftentimes are not enough, however, to attract urban residents who have acquired a taste for the occupational, educational, and cultural amenities of the metropolitan center.

Typically, rural areas are deficient in services with the highest consumption priorities in an affluent society. Many of these services have threshold levels that cannot be attained in the local service centers or even the submetropolitan growth center. Rural service centers offer most advantageously, however, convenience or proximity of open space and low-order services to the local resident, which for some families, depending upon socioeconomic status and position in life cycle, have a high priority in the overall consumption function (*1, 39*).

Reducing local taxes

The element of proximity is involved also in the participation of local people in public affairs. Studies of citizen participation in political activity have demonstrated a high inverse correlation between the degree of participation and the distance involved in reaching the locus of participation. Where local control is an important political value, it can be more readily obtained in economic areas where residents are in close proximity to the service center and the related public control functions (*107*).

Increased local participation in rural area government exacts a price in that the electorate may be less willing to undertake public expenditures for social services that result in benefits not wholly realized by local residents and yet that incur costs that fall fully upon them. Property tax relief, for example, becomes a major concern of the electorate when the social benefits derived from the taxes assessed on local property dissipate to the metropolitan areas that become the destination of the area's young people. Without property tax relief and grants-in-aid to local governments, local expenditures on education are rationally restricted to below-average levels.

Enlarging community boundaries

Social and political interest communities coincide closely with economic interest communities—for example, as demonstrated by the correspondence between community college districts and economic development areas in Iowa. Moreover, the use of the "compactness" criterion in legislative redistricting corresponds with the delineation criteria for urban-focused multicounty functional economic areas. Neither the politically oriented nor the economically oriented districting, however, envisions a hierarchic system of districts in the context of the Economic Development Act of 1965 (which establishes a three-level hierarchy: redevelopment areas, economic development districts, and economic development regions).

For some public services, an additional level in the hierarchic structure of local service and growth centers is essential. Unified public service systems may need to include several community service districts, with all focusing, however, on a major regional center. For example, an Iron Mountain, Mich., economic area might focus on Milwaukee as its principal growth center. Similarly, a Marquette, Mich., economic area might also focus on Milwaukee, which is a growth center for a southern Wisconsin "core" region. Thus, each of the growth centers in the declining economic areas of a peripheral region—the Upper Great Lakes Development Region—would function as "gateways" to major "core" regions and their growth centers. Obviously, the concept of a relevant economic community must be enlarged so as to take into account the widespread external effects associated with population outmigration from peripheral areas lacking an economic potential for self-sustaining growth (*77, 78*).

Given the declining-growing area dichotomy and a hierarchy of regional and area centers, the external effects of population migration are categorized into at least four types as follows:

Type I effects, which result from a decrease in household expenditures in the originating rural area and an increase in household expenditures in the receiving metropolitan area;

Type II effects, which result from a loss or gain in production inputs associated with changes in production and factor mix in the two areas;

Type III effects, which result from a loss or gain in the cost structures of firms processing the production outputs associated with changes in product and factor mix in the two areas; and

Type IV effects, which result from the accumulative effects on the public sector through loss of tax revenue and reduction in use of facilities in the rural areas because of outmigration and the accumulative effect on the public sector through increase of tax revenue and increased use of facilities because of immigration.

For the declining rural areas, therefore, the appropriate service unit for manpower training and development is no longer the community service district but a much more extensive regional organization that "packages" the area training and educational activities located in declining rural areas.

Economic and political linkages between growth centers of declining rural areas and growing metropolitan centers also facilitate the flow of information concerning investment opportunities and sources of financing. For example, community buildings and other public facilities in the declining areas may require only minor alterations before being suitable as attractive tourist facilities. Area airports can serve as transportation links with distant regional centers, while local schools can be used by the children of vacationing parents to provide diversity in their schooling experiences. Indeed, the opportunities for expanding the range of consumption choices by large-scale seasonal migration of people from metropolitan to rural areas, and vice versa, have been barely mentioned despite the widespread recognition of emerging demands for summer residences and open space.

Information Networks

Numerous students of the city have referred to its information orientation. The central business district, which brings together a large number of specialists in the acquisition, dissemination, and use of knowledge, is a distinguishing characteristic of the modern metropolis (*84, 103, 115*). Indeed, an important difference between the metropolitan growth center and the submetropolitan center is the relative ease of access to information sources.

Projecting future activity

A twofold application of the information component in public services occurs in (a) the preparation and (b) the use of projections for planning (*110*). The two uses of information are differentiated so that the projections are not erroneously viewed as plans, and vice versa.

The problems of transportation planning illustrate the role of public projections in modifying rural infrastructures for the purpose of attaining the preferred objectives of significant portions of an area's population. For example, transportation planning may take the form of projecting future demand for interurban highways within the rural area and between the rural area and other economic areas. If favorable access and minimum travel time were a primary concern to transportation planners, then future plans might show the interurban highways joining local service centers to submetropolitan growth center in a "fishbone" rather than the "grid" pattern of highways. However, new approaches to land acquisitions would be needed to complement the projected modifications in highway design.

Public acceptance of the criteria and practices of a futuristically oriented highway planning organization becomes a limiting factor in achieving a modification of highway patterns that would induce radical changes in existing settlement patterns. The probability of private asset erosion in small, declining rural service centers threatens the success of public efforts to improve the overall efficiency of rural and metropolitan infrastructures through highway and settlement planning and relocation. Thus, the element of asset fixity, and the lack of rapid amortization schemes for private investments in poorly located service centers, frustrate public policies that seek improvements in the adjustment of settlement patterns to modern technology and tastes.

Interurban highway planning is being influenced also by the emerging patterns of public investments in the focal centers of functional economic areas. For example, the local service center, which has the facilities for primary and secondary education, and medical, hospital, and recreation services, is experiencing the slowest population growth; it is, however, readily accessible to all residents in its service area. The submetropolitan growth center, which is experiencing more rapid growth rates than the local service center, is accessible to local residents in each of the service areas, particularly via the local service center. Indeed, an important function performed by the submetropolitan growth center is its role as an information source for the businesses located in the smaller service centers. Thus, the projected alternative distributions of population within the economic area must be associated with alternative designs of optimal road systems, given the criterion of (a) minimizing average travel time per person or (b) maximizing the access of area businesses to markets, manpower, and materials.

Projections of future levels of economic activity in rural-urban regions are essential in the planning and development of basic social services that make up the rural infrastructure. The projections and plans, in turn, evolve from analyses of rural industrialization, job opportunities specified by occupations as well as by industry, and income distributions resulting from the anticipated patterns of industry and occupation.

Much of the research upon which realistic projections of future levels of requirements of services that make up the rural infrastructure has not been completed, nor has the relation been fully assessed between the needed research and the planning data that are most useful in choosing among program alternatives, and the costs associated with these alternatives. Some work on medical and health requirements of rural areas has been undertaken in Montana and Wisconsin, and some isolated research studies dealing with rural roads, rural electrification, rural schools, and related public investments in the rural facilities are available (*56, 68, 94, 95, 96, 106, 124*). But none show in a systematic and comprehensive fashion the total infrastructure requirements of rural communities of varying size with specified relationships to communities of larger and lesser size (*40, 67, 84, 177, 200, 203*). Additional studies of rural infrastructures are needed in a systems context that shows the complementaries between rural areas and metropolitan areas, between growth centers and local service centers, and between small towns generally and open country population.

Evaluating public investment alternatives

Besides serving as a focal point for urban services, the submetropolitan growth center provides information for improving the performance of factor and product markets in the area (*126*). Farm and nonfarm labor markets, as well as capital and products markets, operate most efficiently in the focal center of economic areas. Scarcity of land and of labor, for example, contributes to high productivity, which in turn adds to the spatial advantage and, thus, to the competitive position of farmers near the center as compared with farmers in the periphery of an economic area. Of course, the relevant economic area for cattle ranchers in the Great Plains, for example, is the national market, while for dairy farmers in New England, the relevant economic area is the metropolitan milkshed. Problems of labor shortages and capital rationing, however, are not necessarily associated with distance from the market centers for the commercial farms of the Great Plains or New England, nor are the growth centers of the economic areas in which the farms are located necessarily the relevant service centers for relaxing the constraints imposed by capital and labor restrictions (*45, 79*). Indeed, a producing unit may be oriented to several focal points, just as a consuming unit in a declining area is oriented to the area growth center for current high-order personal services and to a regional center for future employment opportunities. Projected future development in the periphery of an economic area, or in peripheral areas of a "core" region, is contingent, therefore, upon the assumptions concerning future patterns of business spatial linkages; in rural areas these linkages will evolve partly as a consequence of the public services available for improving the relative economic position of an area and its people (*19, 23, 101*).

Focalization of public investments in the growth center and local service centers of an economic area reinforce historic processes of urbanization in rural areas; but, at the same time, the excesses of urban conditions (e.g., congestion, pollution, and blight) are mitigated by the emergence of new location alternatives in rural areas for both businesses and households (*49*). Exploratory studies of cost-volume relationships for urban services point to cities of 25,000 to 50,000 as being of minimal size for essential high-order services that young people and those in the productive ages view as necessities in an affluent society (*67, 84, 146, 169, 177, 179*). These services have a high-scale preference, however, as compared to the low-order services available in small urban places. Thus, public investments in low-order services can be distributed over a larger number of urban places than the public investments in high-order services, insofar as the local service centers represent a real settlement choice for substantial numbers of people.

Summary

Basic public investments in social overhead make up the infrastructure in rural areas. Included in the social overhead are the physical facilities for rendering essential public services—roads, streets, highways, and other transportation and communication networks; water and sewerage systems; energy production and distribution; schools, hospitals, clinics, and other health facilities; and public housing, education, and administration. The services derived from these public investments are indeed a necessary, though not a sufficient, condition of economic growth and development.

Rural infrastructures are necessary for rural industrialization. Without an adequate infrastructure (including information-producing activities), economical access to markets, labor, and raw materials would be denied to industries locating in rural areas. Lack of access and information reduces the competitive advantage of rural industries in export markets. Without basic location advantages for a self-sustaining rural economic base, however, even a well-developed infrastructure becomes an excessive financial burden for rural citizens—an inequity that rests heavily upon rural society and, particularly, its farm population.

Declining rural areas generally are characterized by relatively high per capita expenditures for public services and relatively high employment levels in the basic services—transportation, communications, public utilities, and construction. Moreover, declining rural areas are marked by a large proportion of low income families, high dependency ratios, and low median earnings per worker, even when earnings are adjusted for occupational differences. Many families in declining areas live on fixed incomes; however, they may own substantial property in their community. Realistically, therefore, community development efforts that result in heavier tax loads are resisted by a majority of voters in declining areas.

Growing areas are characterized by a community-development civic consciousness. A large proportion of the population is in the young and economically productive age groups. Median earnings per worker are higher in growing areas. However, governmental problems of financing the expansion of local infrastructures are not necessarily resolved by the higher per capita incomes. A primary dependence upon local property taxes frustrates local governments in providing essential public services.

Both growing and declining rural areas may need reorganization of public service agencies as a means of reducing costs and expanding the range of public service choices. Local service districts—multimunicipal local service agencies focusing on urban places of less than 10,000 population—might be viewed as primary public management units for producing public services with a high proximity preference. Primary and secondary schools, health centers and medical clinics, water and sewerage systems, and farm-to-market roads might be organized on a combined city-county basis (with particular emphasis being placed on the needs of low income families in the locality). Both quasi-market and administrative processes may be involved in the sale and disposition of these services within the local community.

High-order public services in rural areas are focalized in submetropolitan growth centers—cities of less than 50,000 population. A growth center thus serves two public functions: (1) as a local service center for the immediate urban and surrounding open-country and small town population, and (2) as a growth center for an entire multicounty economic area. A federation of local service districts might form the area service district, which would be the producing and distributing agency for one or more high-order public services (e.g., vocational training and 2-year liberal arts programs, specialized medical and hospital services, and professional services not available elsewhere). Growth center public services would be identified, finally, by their high quality or scale preference, which accounts for their localization in the largest city of a multicounty area.

Enabling legislation to provide public services for a multicounty area may be necessary for rural areas to establish a tax and service base that is broad enough to support essential high-order public services. In Iowa, for example, 16 vocational training and community college districts were established as basic management and taxing units in providing an essential high-order public service. These units correspond, but on a school-district basis, with the multicounty functional economic areas delineated for purposes of State and Federal planning and programing. Enabling legislation exists, also, for establishing hospital and other service districts on a multicounty basis. Regional jails are being proposed, too, as additional means of reducing per capita costs of public services.

When a single set of area boundaries are used by the specialized service units, the management of each of these units may seek common means of coordinating their capital budgets with reference to long-run area goals and growth targets. The area targets thus would provide a preferred combination of public service objectives based on the needs and desires of the entire area population.

Each level and combination of public services associated with a particular local service center represents a consumption choice for a potential area resident. Because a substantial proportion of potential residents of local service centers may seek employment in the submetropolitan growth center, their residence options would include not only the local service center but also the growth center, nearby local service centers, and the open country. Those employed in the local service centers, however, may entertain a much narrower range of settlement alternatives. In addition, both local service and growth centers, because of their residential attraction to a growing number of households, offer a wide range of local skills and services to businesses seeking a new location.

The spatial distribution of families is constrained, finally, by the level of educational attainment and initial employment opportunity. Typically, the highest levels of educational attainment and widest range of employment opportunities occur in the growth center and in the nearby local service centers that exist primarily as a place of residence for the growth center labor force.

Further rationalization of rural infrastructure is essential in providing the people of the nation, and particularly those now residing in rural areas, with a reasonable range of settlement options that includes the rural community of less than 10,000 population as well as medium-size communities of 10,000 to 100,000 population. In growing rural areas, the growth center typically is a transitional medium-size community that will, before the end of the century, become a metropolitan center. In declining rural areas, the growth center will remain in a submetropolitan status, with less than 50,000 population but, nonetheless, a self-sustaining symbiotic entity providing an entire economic area with essential services; the range and quality of these services can be made to compare favorably with those available in the larger and more distant metropolitan centers. For rural areas generally, however, a rationalization of the organization and management of public services is necessary to reduce public service costs or, alternatively, to improve public service quality, and thus to provide those engaged in either household or business location decisions a feasible and competitive settlement alternative.

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Chapter 7

Local Government and Poverty in Rural Areas

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An Overview of Local Government

The size of the rural population (as defined by the Census Bureau) was stabilized at about 54 million between 1950 and 1960. The composition of that population changed drastically, however, as the number living on farms declined from 23 to 13 million and the nonfarm population increased from 31 to 41 million. It is estimated that the farm population will drop to 9 million by 1980 while the total rural population rises to 60 million. It has also been noted that increases in the rural population generally occur in counties which include urban centers of 10,000 or more, or which are near metropolitan centers (*13, pp. 102–103*).[1]

Poverty strikes hard at rural families. Using family annual income of $3,000 as the dividing line for poverty, the 1960 census shows that almost half of all poor families live in rural areas. Farm families, with 7 percent of total population, account for 16 percent of the poor families; rural nonfarm families, comprising 22 percent of total families, account for 30 percent of the poor. One-fourth of the rural poor are Negro, and one-half live in the South (*13, pp. 104–105*). Within this context, the discussion of rural poverty takes on substantial importance not only for the rural communities affected but for the nation as a whole. Since the rural areas "export" population to large cities, the effects of rural poverty are found throughout the fabric of American life.

Local government has much to do with the impact of poverty on communities and individuals. Government policies and services contribute to the environment in which economic activity thrives or withers. Policies and services also contribute to the total resources of each individual in terms of his health, education, self-respect, economic productivity, and social alienation or involvement.

Dimensions of Local Government

The U.S. Census of Governments of 1962 has the best available data on governmental units and activities. Although the material is not well organized for the separation of rural from urban governments, it is possible to draw from the data several useful generalizations. It is worth noting for future research that a special tabulation of census data could provide extremely valuable raw material for analysis of rural government activities and expenditures.

In using data from the Census of Governments, rural areas can best be defined as the counties which are not included in standard metropolitan statistical areas (SMSA's). Since SMSA's include cities with 50,000 or more population and the counties in which they are located, together with adjacent "tributary" counties, the remaining counties include only smaller cities and towns. Many of these smaller cities and towns are closely linked with the rural economy, making it not illogical to include the smaller urban places as integral parts of the rural area. The definition of rural areas used here differs from the Bureau of the Census definition of rural population which includes some parts of SMSA counties and which excludes incorporated places of 2,500 or more population in all counties.

Table 1 shows that the 66 million people living in counties outside of SMSA's are served by almost 73,000 units of local government. Many of these units overlap, of course, with perhaps the most common set of governments for one community comprising a municipality (or township), school district, and county. Many States of the South and West have no township governments, with all basic services of local government performed by counties or by incorporated municipalities. Two States have no counties (Connecticut and Rhode Island), and Alaska is divided into districts instead of counties.

Table 1.—*Total units of local government in counties outside of standard metropolitan statistical areas, 1962*

Type of government	Number
Counties	2,733
Municipalities	13,855
Townships	14,569
School districts	28,674
Special districts	12,912
Total	72,743
With taxing power	66,136
Without taxing power	6,607

Sources: Census of Governments, 1962, Vol. I (table 13) and Vol. III (table 22).

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

Table 2.—*Counties, municipalities, and townships by population size groups*

Population group	Counties[1]		Municipalities		Townships	
	Number	Percent	Number	Percent	Number	Percent
50,000 or more	299	11.1	-----	-----	197	1.4
25,000–49,999	550	20.5	173	1.2		
10,000–24,999	1,055	39.3	524	3.8		
5,000 – 9,999	525	19.5	773	5.6	4,274	29.3
2,500 – 4,999	174	6.5	1,206	8.7		
1,000 – 2,499	66	2.5	2,683	19.4		
Less than 1,000	18	.7	8,496	61.3	10,098	69.3
Total	2,687	100	13,855	100	14,569	100

Sources: Census of Governments, 1962. Vol. I (table 13) and Vol. III (table 22).

[1] Excludes Alaska and Hawaii.

Some communities are served by one or more special districts, adding as many as six layers of government (*16, p. 12*).

The size-distribution of governments suggests one of the major problems in the performance of services—a very high percentage of units serve very, very small populations (table 2). More than 18,000 municipalities and townships serve communities with less than 1,000 people; this size group accounts for 61 percent of the municipalities and 69 percent of the townships. Conversely, only 5 percent of the municipalities and 1.5 percent of the townships have more than 10,000 people. Counties serve larger population groups, but only 11 percent of the counties have 50,000 or more people.

Within the nation as a whole (urban and rural), the total number of local governments decreased in the 1952–62 decade. The decrease was almost wholly accounted for by consolidation of school districts (reducing 67,000 districts to 35,000) partly balanced by a sharp increase in special districts. The other types of government changed very moderately (*55, p. 1*). In spite of the reduction in school districts, the rural area is still characterized by small school systems (*55, table 13*):

Size of school system	*Percent of school systems*
1,200 or more pupils	10.7
300 to 1,199 pupils	17.2
Under 300 pupils	72.1
	100.0

The most apparent regional difference among the States is the presence or absence of township government. The Census of Governments (*55, table 13*) indicates that the States without township government occur in the Southeast, Southwest, Mountain, and Pacific areas. Less apparent is the wide differential in the size distribution of counties by region. New England and the Middle Atlantic States have a little more than 5 percent of their counties in the "under 10,000 population" group; the North Central States (with townships) and the South (without townships) are both very close to 25 percent; and the Western States (without townships) have more than 50 percent of their counties with less than 10,000 persons. Differences among the regions are equally large with respect to the size distribution of municipalities and school districts. The figures are summarized in table 3. Although the regional patterns are reasonably representative of the States within each region, some States differ markedly (especially in the North Central region where Kansas, Nebraska, and the Dakotas are more like the Western region).

Governments differ in area and population density as well as in total numbers of residents. The area and density figures are important in assessing governmental services, but unfortunately there was not sufficient time to compile and analyze area data for this study.

Table 3.—*Size differentials among the regions for governmental units in rural areas, 1962*

Governmental unit	New England	Middle Atlantic	South	North Central	West
Counties with less than 10,000 population (percent of total counties)	5.7	5.2	24.5	26.0	52.4
Municipalities with less than 5,000 population (percent of all municipalities)	58.3	82.0	80.9	92.9	86.9
School systems with less than 300 pupils, (percent of all school systems)	45.4	64.4	40.1	80.6	43.0

Sources: Census of Governments, 1962. Vol. I (table 13) and Vol. III (table 22).

Structure and Functions of Local Government

In general the structure and functions of local government are strictly defined by State constitutions and statutes. The controls are both positive in nature (prescribing structure, elected officials, required functions) and negative (prescribing tax rate limits, debts limits, and sometimes limits on budget revenue estimates). By a general clause reserving to themselves all powers not specifically delegated to local government, the States closely control the adaptation or extension of rural local government powers.

Blair (*10, ch. 9*) contains a good summary of the structure and powers of rural counties. Nearly 2,000 counties follow the Pennsylvania model with three to five elected commissioners responsible for all county functions except the judicial function. The judges are elected as part of the county structure, with considerable independence. In contrast to this overall structure, approximately 1,000 counties follow the New York model with elected township supervisors sitting ex officio as the county governing body. These counties typically have as many as 20 members of the county board; 50-member boards are not uncommon, and at least one county board numbers 100 members. Because of their large size, such county boards frequently conduct their business through committees. Single executives, in the form of county managers or county administrative officers, are generally found only in the larger, more urban counties.

Blair also states that county governing bodies are very largely responsible for the same basic set of services: property assessment and tax collection, debt administration, operation of the county "poor house" and the county jail, registration or recording of legal papers, administration of elections, law enforcement, road maintenance, nominal health services, and participation in agricultural extension services. Counties have varying degrees of responsibility for education. The judicial function is sometimes coequal with the county governing body, and sometimes superior. Other officials who are commonly elected in counties include the judge, treasurer, surveyor, assessor, recorder of deeds, county clerk, sheriff, prosecuting attorney, clerk of courts, coroner, and superintendent of schools.

Township and municipal government in rural areas has some of the attributes of county government: many elected officials in addition to the governing body, strict definition of powers and duties in State constitution and statute, tax and debt limitations, and a reasonably consistent set of primary functions. Snider notes several common threads in the forms of township government (*42, pp. 93–99*). In about half of the States with township government the members of the township governing bodies are all elected for those positions. In the remaining township States, the governing body is composed of ex officio members elected to other posts, including justice of the peace, township clerk, treasurer, and similar offices. About half of the township States permit the township governing body to perform both executive and legislative roles; the other township States provide for a chief officer who is responsible for at least a substantial part of the executive task. Chief officers are variously titled trustee, supervisor, and town chairman.

The purpose of all local governments, regardless of form or structure, is expressed in terms of services. It is very difficult, however, to describe accurately the variation in services performed by so numerous and heterogeneous a group as "local government." Tables 4 and 5 provide crude summaries of service for all local governments combined. Table 4 compares urban (within SMSA's) and rural (outside of SMSA's) governments for the nation as a whole. Employment figures are standardized first by adding full-time government employees to the full-time equivalent of part-time employees, then expressing the total as a rate per 10,000 population. The equalized employment rate is higher in rural areas than in urban areas for the following functions: education (teaching and nonteaching), highways, general control, financial administration, electric power, and natural resources. Urban areas exceed rural areas by a marked numerical or percentage difference in the following functions: welfare, hospitals, health, police protection, fire protection, sewerage, sanitation, parks and recreation, housing and renewal, corrections, libraries, and other small functional groups.

The relatively high employment rate in rural areas for education is probably related to at least three factors. First, the percentage of children in the total population is higher in rural than in urban areas (because of higher rural birth rates); for a given total population, rural areas would therefore need more teachers. Secondly, urban areas have large parochial school systems (about half as large as the public school system in Philadelphia, for example), reducing the number of teachers needed in public schools for a given total population. Finally, the number of teachers is inversely related to the size of school systems or populations, probably as a response to density—small schools to avoid overlong school bus rides; small or uneven classes because there are too few pupils for efficient assignment of teachers. The size-density relationship is supported by the Census of Governments, 1962 (*56, table 19*), which shows a downward trend in the full-time equivalent number of teachers per 10,000 population as counties increase in size—from 116 teachers for counties under 10,000 to 87 teachers for counties larger than 250,000. The report shows the same inverse relationship between size of school system and the number of full-time equivalent teachers per 1,000 pupils (*56, table 27*). Systems with less than 50 pupils have 78 teachers per 1,000 pupils, systems with 50 to 150 pupils have 53 teachers per 1,000 pupils, and the teacher ratio drops more gradually thereafter to a low of 43 for systems with more than 3,000 pupils.

TABLE 4.—*Local government employees, by function, 1962*

Function	Fulltime equivalent employees per 10,000 population		Fulltime employees as a percent of total employees	
	Inside SMSA	Outside SMSA	Inside SMSA	Outside SMSA
Education:				
Teachers	85.6	100.6	91	95
Other	33.9	36.6	68	54
Other than education	128.6	91.7	89	68
Highways	11.3	19.4	94	81
Public welfare	5.3	3.2	96	83
Hospitals	16.6	14.6	94	87
Health	3.3	1.8	92	77
Police protection	18.5	9.5	87	77
Fire protection	10.8	3.8	84	35
Sewerage	3.1	1.7	93	79
Sanitation other than sewerage	7.0	3.2	97	81
Parks and recreation	6.7	1.7	79	61
Natural resources	0.8	2.1	83	62
Housing and urban renewal	2.6	0.5	93	64
Airports	0.7	0.1	97	79
Water transport and terminals	0.5	0.1	78	46
Correction	2.4	0.8	98	82
Libraries	2.7	1.5	72	53
Financial administration	5.4	6.1	80	47
General control	7.5	8.3	86	70
Water supply	5.9	4.2	91	79
Electric power	2.6	3.2	99	92
Other and unallocable	14.9	6.0	83	37

Source: Census of Governments, 1962. Vol. III (table 8).

TABLE 5.—*Percentage of local government employees who are full-time, by type of government and by population size-group, 1962*

Population size-group (Thousands)	County government	Municipal government	Township government	
			New England and Middle Atlantic States	Other States
Total	87	85	65	16
Over 250	92	93[1] 92[1]	84	52
100–249.9				
50– 99.9	85	90		
25– 49.9	83	88		
10– 24.9	80	82	79	
5– 9.9	74	71	67	11
2.5– 4.9		59	51	
Under 2.5		32	34	

Sources: Census of Governments, 1962. Vol. III (tables 19, 21, 23, 24).

Note: This table combines urban and rural areas.

[1] Population size-groups are divided: 100,000–199,999, and over 200,000.

The relatively high employment rate for highway programs in rural areas can be explained by three factors: low density, more part-time (probably less efficient) manpower, and less mechanization than urban areas. The density factor is again suggested [2] in the Census of Governments which shows a rate of 30 employees for counties of less than 10,000 decreasing steadily to a rate of 12 employees for counties with more than 250,000 people (56, *table 19*). (Employees for local governments within counties are combined with county employees in these figures).

It is instructive to look at another aspect of employment for local government services. Tables 4 and 5 suggest that rural government is markedly part-time government. Table 4 shows the percentage of full-time employees by function; table 5 shows the same information by size of government. Rural governments have lower full-time complements than urban governments in all functions except teaching. The percentage of full-time employment also varies in proportion with the population size-group served; the smallest municipal and township units (under 2,500) have only about one-third full-time employees while the larger units vary from 52 to 90 percent. Counties have less variation than other forms of local government with 74 percent full-time employees in counties of 5,000 or less and more than 80 percent in counties larger than 10,000. Since the size-distribution data combine urban and rural areas, it is likely that the full-time percentages for rural areas alone would be less than the figures shown. Residents of small urban communities in metropolitan areas demand more services, and higher levels of service, than their counterparts in nonmetropolitan areas.

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[2] Density relationships can, of course, be measured most accurately by using density measurements, but such data have not been cross-tabulated with government services in census reports.

Interaction of Local, State, and Federal Governments

Although the focus of this study is on the ability of local government to provide the services required to minimize or to ameliorate the incidence of rural poverty, it is not possible to evaluate the need or the performance of local government outside the context of all levels of government. In the first place, the levels of government overlap in providing direct services to rural individuals. In the second place, local government is both led and stimulated to provide services, or to raise service levels, by subsidies from the Federal and State governments.

Table 6 summarizes the relationships among levels of government for the services important to the poverty group as part of the total population, or to the poverty group primarily. In two functional areas—natural resources, and health and hospitals—each level of government spends most of its own money in direct services. In all other functional areas, however, there is a substantial transfer of money from higher to lower levels. This transfer has three patterns. In one function area (housing and urban renewal) the Federal Government gives all of its transfer payments to local government. In other cases (such as education) the Federal Government transfers money both to the State and local governments with much the greater share going to States. And third, the Federal Government gives all of its transfer payments to States for highways, for welfare, and for social insurance. States may use Federal funds in further distribution to local government (e.g., in welfare), although for most functions the States transfer their own funds to local government. Local government receives about one-third of its expenditure requirements from subsidies and grants for education, highways, and housing and renewal; about two-thirds is received from transfers for public welfare; less than one-tenth is received from transfers for health and hospitals.

Table 7 shows the relationship of intergovernmental payments to total revenues for States and for types of municipalities. More than a fifth of State revenue is received as transfers from the Federal Government. Except for special districts, all types of local government receive the bulk of their transfer payments from the State—including Federal funds passed through the State funnel as well as

TABLE 6.—*General expenditure, direct and intergovernmental, for selected functions, 1962*

[Data in millions]

Expenditure	All government	Federal government	State government	Local government
Education	$22,814	$ 1,767	$10,744	$17,962
Direct	22,814	598	4,270	17,946
Intergovernmental	.....	1,169	6,474	16
Highways	10,508	2,899	7,961	3,753
Direct	10,508	151	6,635	3,722
Intergovernmental	.....	2,748	1,327	31
Public welfare	5,147	2,511	4,285	2,612
Direct	5,147	63	2,509	2,575
Intergovernmental	.....	2,448	1,777	37
Health and hospitals	6,136	1,960	2,351	2,254
Direct	6,136	1,793	2,161	2,182
Intergovernmental	.....	168	191	72
Natural resources	12,194	10,965	992	401
Direct	12,194	10,823	973	398
Intergovernmental	.....	142	19	4
Housing and urban renewal	1,701	863	43	1,145
Direct	1,701	548	8	1,145
Intergovernmental	.....	315	35	
Social insurance administration	727	789	399	
Direct	727	328	399	
Intergovernmental	.....	461		

Source: Census of Governments, 1962: Vol. IV, No. 4, Compendium of Government Finances (table 7).

Note: Duplicative intergovernmental transactions are excluded. Data include urban and rural areas combined.

State funds derived from State tax revenue. Counties and school districts receive the most help (well over a third of total revenue), while municipalities, townships, and special districts get substantially less (about a fifth of total revenue).

TABLE 7.—*Intergovernmental transfers of funds, 1962: Percentage of total general revenue received from intergovernmental transfers*

Receiving unit	Paying unit		
	Federal	State	Total
States	22.7	.....	22.7
Counties	0.7	36.4	37.1
Municipalities	2.5	16.2	18.7
Townships	0.8	20.6	21.4
School districts	1.4	37.2	38.6
Special districts	8.9	3.2	[1]21.1

Sources: Census of Governments, 1962. Vol. IV, No. 4. Compendium of Government Finances.

[1] Includes 9 percent transferred from local government.

Summary expenditure data in the Census of Governments are not presented separately for urban and rural areas. Table 8, with local governments arranged by county population size groups, indicates that smaller governments get relatively more financial help from grants and subsidies than do the larger governments. The very smallest population group (under 10,000) deviates from this generalization by dropping a little below the next two larger groups in the percentage of total revenue received from intergovernmental transfers. Nevertheless, it seems likely that most of the rural area governments, concentrated in the small sizes, get relatively more help than the larger, urban governments.

TABLE 8.—*Intergovernmental revenue as a percentage of total revenue for county areas, by size groups* [1]

Size group	Intergovernmental transfer (percent)	
	Total	From States
All	30.4	28.4
Over 250,000	25.8	23.7
100,000–249,999	31.7	29.6
50,000–99,999	37.3	35.3
25,000–49,999	39.4	37.8
10,000–24,999	40.5	39.4
Under 10,000	37.7	36.7

Sources: Census of Governments, 1962. Vol. IV, No. 4. Compendium of Government Finances.

[1] A county area includes the county government and all other units of government within the county.

The numbers suggest, but cannot fully demonstrate the complex relationships of local, State, and Federal Government activities. Even a brief review of the literature, supplemented by interviews with officials of several Federal agencies, shows that Federal assistance is provided through several channels in the kinds of activity most closely related to preventing or ameliorating poverty. These channels include:

Direct services to individuals, businesses, nonprofit development corporations;

Financial assistance to States for State-administered services (and sometimes relayed by States to units of local government for administration of services);

Financial assistance to "districts" composed of groups of local governments (usually counties) with limited purposes and without taxing powers;

Financial assistance to units of local government.

Direct services

Several large programs are administered directly by the Federal Government. In the Department of Agriculture, for example, such programs include farm home loans, credit for cooperatives, and marketing agreements. In addition, the Department has programs which can serve either private agencies (in the form of development corporations, for example) or public agencies as the ultimate "consumers" of assistance: resource conservation and development projects are illustrative of this type. Other large money payments made directly by Federal agencies to persons or private agencies include old age, survivors, and disability insurance and hospital construction grants.

Assistance to States

Several departments have very large programs in this category. The Department of Health, Education, and Welfare distributes much of its funds through the State channel, with States varying in their further distribution through local government. School funds flow to school districts; public assistance, child welfare, and vocational rehabilitation funds are disbursed by State agencies or by local (county or municipal) agencies under State standards. The Department of Agriculture uses this channel in distributing surplus food, with the States delegating the operating responsibility to local governments, usually counties. The Department of Transportation distributes highway aid to State governments.

Assistance to districts

Although not a new device, the district channel is becoming especially popular in programs providing assistance for economic development and for some forms of physical development. The Appalachian Regional Commission and the Economic Development Administration are both concerned with sub-State regions (usually collections of counties) for development programing and investment. The Department of Agriculture is concerned with districts for water and sewer facility loans, and with watersheds in flood control and conservation activity. The Department of Housing and Urban Development is supporting regional councils of government and regional planning agencies in the development of metropolitan area planning and action programs.

Direct assistance to local government

The Department of Housing and Urban Development has several programs of direct financial aid to local government including public housing, urban renewal, planning, and the acquisition of open space and other facilities. The Department of Health, Education, and Welfare makes grants to local government (mostly counties) to provide health facilities and services for migratory workers. The Office of Economic Opportunity (OEO) has a mixed position since it deals with community action agencies which include local government participation but are not purely agencies of local government. Ira Kaye (personal interview)[3] noted that half of the 635 rural community action agencies are based on single counties and half are multicounty units. The impetus for combining counties in community action agencies came from the counties, not the Federal agency (although OEO is more than pleased to accommodate jointures).

Although it is not possible to review State-local relationships in detail within the space of this report, the scope and nature of those services is partly described by the earlier review of intergovernmental transfers of funds, and partly described by the review of Federal agencies' relationships to State and local governments. There are wide variations in the scale and level of direct and indirect services provided by States, reflecting tradition, wealth, and policy.

Some considerations of tradition and policy (such as constitutional limits on local government) and of wealth (in personal income and tax base) are included in later sections of this report with reference to the advantages and disadvantages of the existing governmental framework.

Evaluation of Present Governmental Arrangements

Before an attempt is made to evaluate the present arrangement of local governments in rural areas, the problem needs further definition. First, the scope of services relevant to poverty is hardly less than the total activity of government. Public assistance, antipoverty, surplus food, and similar programs are obviously aimed at those who are already dependent by reason of physical or mental disability, lack of basic education or work skill, lack of (or isolation from) available work, or employment at full-time or part-time work which pays less than a living wage. But it is also widely accepted that preventing poverty, or providing opportunities to rise out of poverty, are equally important in dealing with the problem. Effective education, personal and environmental health services, employment training, provision of good roads and utility services—these are some of the governmental services necessary to make all families or individuals capable of self-support or to make the community attractive to existing or prospective employers. All local governments provide some of the services in these two categories; whatever the range of services, every local government needs administrative capability in order to function. In short, concern for the whole structure of local government is relevant to a study of rural poverty.

Among those who have examined local government in rural areas, there is wide consensus on several glaring difficulties or deficiencies: rigid structure, inefficient scale, and poor performance of service. A smaller but insistent group of observers is concerned with the failure of local government to provide an effective, democratic response to the needs and wants of the rural poor.

Deficiencies of Structure, Cost, and Service

Legal restrictions

Most studies of local government in rural areas review the restrictive nature of State constitutions. Limitations usually affect the legal form or structure of local government, elective officers, tax and debt powers, and the range of services to be provided. The nature and variety of constitutional and statutory constraints have been very effectively presented by the U.S. Advisory Commission on Intergovernmental Relations (ACIR) (*49*).

The constitutional and statutory provisions which ACIR finds generally limiting can be reviewed briefly for the present purpose. By limiting the form of government, States prevent the adaptation of form to changing need. A combined legislative-executive body at the head of government (especially county government) virtually forecloses the opportunity for effective management practices. Long lists of elected officials, with pay or fees prescribed, dilute the effect of the ballot while at the same time imposing costs and limiting flexibility in combining activities under full-time appointive personnel. Restrictions on taxing authority generally confine local government to a narrow fiscal base, limiting governmental income, and stimulating (or reinforcing) a strong conservative political motivation for large property owners.

The ACIR report further comments that the restrictive, complex nature of the constitutional and statutory controls makes it very difficult for local officials to know precisely what they can do. Questions with respect to new programs and new governmental devices are frequently settled by the courts. The expectation of court action almost certainly inhibits local officials from attempting innovation because of delays, costs, and political vulnerability of an unsuccessful attempt at innovation. Since the courts are generally conservative and bound by precedent, innovation is difficult under the strict interpretation of constitutional and statutory provisions.

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[3] Information on persons interviewed is given in the appendix.

Inefficiency of small government

General comments about the inefficiency of small rural governments are found with almost the same frequency and level of agreement as comments on legal constraints. The argument is briefly stated by Burchfield (*12, p. 155*) as one of excessively high overhead costs because of very small population served. The small service group within a single local government cannot support the services of full-time professional personnel. Martin makes the same point when he comments that small government is part-time and amateur (*30, pp. 33–35*). He goes on to note that "amateur" connotes both a lack of professionalism in personnel and a lack of the tools of professional management.

Comments on the part-time character of rural government employment are well supported by the statistical material presented earlier in tables 4 and 5. It is not so well established that part-time service is expensive service in comparison with full-time employment. Table 9 has some arithmetic, from census data, comparing average monthly pay for full-time employees with average monthly pay for the full-time equivalent of part-time employees. For each of the governmental activities used in the comparison, the equivalent part-time pay is higher than the full-time pay, with differentials ranging from 3 to 12 percent of the full-time pay figure.

This comparison of pay for full-time and part-time employees helps to explain the reason for the often-repeated statement that small government has high overhead costs. No matter how few services a government performs, it must maintain the machinery necessary to its very existence: records, bookkeeping, tax collection, banking, legal advertising, and related activities which are required by the nature of any organization or which are required by constitutional or statutory mandate for conducting public business. In small governments the "general control" and "financial administration" categories (to use terms of the Census of Governments) comprise a relatively high proportion of total employment. These overhead activities also have a high percentage of part-time employment.

Figures for employment and expenditure overhead are given in table 10. It is interesting to note a wider range of difference for employment than for money, and to speculate about the explanation. One feasible explanation is that small governments have much of their overhead work performed by elected, part-time officials who accept the prestige of office to offset very low compensation. Other employees of small government (such as highway crews) are paid better for their time even though they too work on a part-time basis. A situation of this kind would give higher relative overhead in employment than in expenditures.

The adverse economies of small size apply to the cost of performing individual services as well as to the cost of government as a whole. This point is made forcefully in one service area after another. For example, Ira Kaye (personal interview) wants community action agencies at the county level (or better yet, the multicounty level) because solutions for many poverty problems are too expensive at small scale. He cited as an example the high overhead costs of a health center for a small population. Kaye also noted the difficulty of getting effective staff for areas too small to provide challenging size and diversity in problems and in potential programs.

A detailed cost study of county government in one farm State gives a more rigorous form to statements on high cost for governments of small size. Boles and Cook used statistical correlation techniques to study the relationship between population

TABLE 9.—*Calculations for comparison of average monthly pay for full-time employees and full-time equivalent of part-time employees of local government outside of SMSA's, 1962*

Item	Selected function				
	Highways	General control	Public welfare	Health	Correction
(1). Full-time employees	124,072	51,637	21,006	11,097	5,299
(2). Full-time equivalent (includes part-time)	131,047	56,117	21,940	11,981	5,626
(3). Full-time equivalent of part-time employees (2) – (1)	6,975	4,480	934	884	327
(4). October payroll ... thousands	$ 41,595	$17,236	$ 6,275	$ 4,162	$1,893
(5). Average earnings for full-time employees	$ 317	$ 304	$ 285	$ 347	$ 336
(6). Total earnings for full-time employees (5)×(1) ... thousands	$ 39,308	$15,697	$ 5,986	$ 3,850	$1,780
(7). Total earning for part-time employees (4) – (6) ... thousands	$ 2,287	$ 1,539	$ 289	$ 312	$ 113
(8). Average earning per full-time equivalent of part-time employees (7) ÷ (3)	$ 328	$ 344	$ 309	$ 353	$ 346

Source: Census of Governments, 1962. Vol. III (table 8).

TABLE 10.—*Employment and expenditures for financial administration and general control as percentages of total employment and expenditures (excluding education), 1962*

Size group of county areas	Financial administration and general control as percent of total	
	Employment	Expenditures
Total	11.6	7.2
Over 250,000	9.5	6.3
100,000–249,999	12.5	7.9
50,000–99,999	13.6	8.5
25,000–49,999	14.1	8.7
10,000–24,999	17.2	9.6
Under 10,000	24.5	10.9

Sources: Census of Governments, 1962. Vol. III (table 19); Vol. IV, No. 4 (table 51).

Note: The data apply to urban and rural areas combined. Data for county areas include county governments plus other local governments within counties.

size and the costs of total county government and of selected services or activities (*11*). Boles and Cook conclude (*p. 38*) that there appears to be an inverse relationship between the total population of a county and the average annual per capita costs for total expenditures and for the services studied individually (including the board of supervisors, auditor, treasurer, sheriff, county attorney, recorder, and assessor). In commenting on their findings, however, the authors note that the statistical relationship does not prove in itself that differences in per capita costs can be entirely explained by economies of scale (*pp. 22, 23*); high per capita costs can reflect higher levels of service as well as the inefficiency of small operations or the use of underqualified personnel.

As a corollary to the problem of high cost of operation for small rural governments, many commentators observe the absence or poor quality of services, and the difficulties of obtaining qualified staff because of low pay, poor facilities, or limited scale of service. Snider (*42*) noted that half the counties in the nation had part-time health services or none at all. Vice President Humphrey (*27, p. 68*) comments on the urgent need to improve educational services, which are drastically deficient in some rural areas. He also calls for extension of the school lunch program to all children, with the further notation that kitchen facilities should be provided where needed. Perhaps the force of the last comment is the unstated premise that children in poverty areas are being denied school lunches because the community cannot or will not provide kitchen facilities at the school building. Additional gaps in services for rural communities are described by Thompson (*46*). In welfare, Thompson finds facilities insufficent and inadequate for the elderly, for persons needing dental and medical care, and for underprivileged children. Thompson is also concerned about the deficiency in educational and job training programs for adults.

Discussions of the high cost of small government are generally focused on the local governments themselves. There is, however, another important consideration. Federal and State governments also have administrative costs which are related to the number of local governments—and the number is inversely related to the size of local governments. The variety and scale of Federal and State programs providing assistance to local government has already been reviewed. In giving such assistance, the administrative overhead of Federal and State agencies will vary partly with the kind and scale of the problems being dealt with, and partly with the number of local government units handling those problems.

As a simple example of this concept, the amount of money required for aid to school districts is generally related to the number of children in school (and perhaps measures of wealth or tax capability). In distributing the money, however, the responsible agency must be concerned with child-accounting records, authorization of checks, bookkeeping, auditing, and a variety of contacts with the receiving units. These administrative charges are likely to be much the same for a district of 10,000 pupils as for a district of 100 pupils. In some kinds of aid, such as urban renewal, the administrative cost of dealing with many small governmental units is probably inflated by an "experience factor." A government which has only one project in this highly technical, complex field will need much more guidance and assistance than an experienced agency, and the administrative cost to the Department of Housing and Urban Development is inflated by that fact. In other words, the Department's costs for handling five projects under five small rural governments is certainly more than five times its costs for handling five similar projects under a single local government. There do not appear to be any available data on this phase of "unit costs" for State and Federal agencies: it is a subject which deserves study.

Interaction Between Government and People

Evaluation of small rural government cannot be restricted to questions of efficiency in providing services or in expenditures. There are other values of social action and self-government which must be considered. One of the best statements of these issues is found in Martin (*30*).

Martin first reviews the advantages claimed for "little government" (*pp. 30–33*). Because of the small numbers involved, government takes place in a context of sociability, with neighbors serving neighbors. Problems are construed and dealt with on a local scale, understandable to almost any concerned citizen. Programs can be fitted closely to local requirements; the small scale of operations needs no bureaucratic structure, with numerous, expensive internal checks and audits. By giving residents a direct, personal feel of representative government, small rural areas provide a "schoolroom" for democracy.

Martin continues to examine the reality of democratic process in small rural government (*30, pp. 50-55 and sec. IV*). He finds, in brief, that small government has democracy more in form or ritual than in meaningful substance. For one thing, small government often deals with so few functions and so little policy that residents have little reason to care about performance. Small population may give a sense of neighborliness at the expense of real choice among differing political views. The limited resources of small governments severely limit practical choices in facilities or services. By concentrating on local issues, or local interpretation of broader issues, small government leads to parochial, fractional response to policy questions which need a wide context and general view. Even at the local level and in terms of local interests democracy is more apparent than real with political dominance by small groups (or families), employment of inept or incapacitated people as a form of public support, and a focus on petty personal differences rather than policy issues.

The generalizations made by Martin are sharply defined by several recent studies. In one of these, Schrag (*39*) looks closely at three very different rural communities. In a prosperous Iowa town he finds a farmer-dominated school system stubbornly educating its children for the good rural life—although a small percentage of the graduates can expect to work in agriculture (*pp. 43-51*). There is little effort to make the children understand the complexity and urban scale of the nation's life. Turning to a poverty-stricken community in Kentucky (*ch. 4*), Schrag find similar parochialism, hardened by a full measure of political dominance. Schools provide jobs for relatives, friends, and supporters of political leaders; school payrolls, among the largest in the community, provide political leverage with banks, suppliers of fuel, insurance brokers, and other local interests. The political system that maintains the inadequate education system, says Schrag (*p. 146*) is not dominated by evil men as much as by ignorance, poverty, isolation, kinship, and a strong sense of place. An impoverished county school system in Alabama, described by Schrag (*p. 177*), requires State-wide approval of a constitutional amendment to raise the local tax rate. Schrag concludes (*p. 282*) that poor education in any rural community can become a social problem thousands of miles away in our highly mobile society. A big school system is justified not least by the broad, diverse mix of social, political, and economic interests which play a role in shaping the educational system.

In a somewhat different way, Morgan focuses on the same basic problems of small rural government (*33*). Although he is primarily concerned with political struggles of the Department of Agriculture in developing the soil conservation district program, some of those struggles reflect political conditions in rural areas. One reason for deciding on the soil conservation district device, for example, was the inability of county government to control land use effectively. Conservative tradition, lack of technical administrative competence, and boundaries drawn for political signifiance with little relevance for land management are cited as weaknesses of county organization. In order to insulate the new program from the county extension services and their strong alliance with county political organizations (*33, p. 76*), the format selected was that of a soil conservation district with "natural" boundaries (such as a watershed), with a majority of its governing body elected by local farmers.

The "district" has become an increasingly popular device for bypassing the existing structure of local government. Like the watershed concept, other programs have identified areas or regions which better express pertinent physical, social, or economic forces than do the accidental or arbitrary boundaries of political jurisdictions. The Employment Service is concerned with labor market areas, the Appalachian Regional Commission and Economic Development Administration are concerned with areas hopefully large enough to contain viable pieces of the economy.

With so many Federal (and State) programs administered at the district, county, and multicounty level, there is a growing risk of confusion or conflict among agencies. Officials of the Department of Agriculture (joint interview) state that the Department has moved toward coordination by fusing all of its field representatives in Technical Action Panels to tie together interacting programs and to apply the best program or mix of programs for each situation. The Panels will be informed on the programs of other Federal agencies, and may act as a referral resource. To accomplish the same purpose on a wider scale, the Bureau of the Budget (*51*) addressed the heads of executive departments and establishments: "Subject: Coordination of development planning for programs based on multijurisdictional areas." The memorandum directs each Federal agency to consult with the Governors and with other Federal departments or agencies before establishing districts in order to develop consistent district patterns. Federal agencies are also instructed to consult with each other as to procedures, planning data, and funding, in order to obtain the maximum combined effect of their several programs.

The movement toward larger scale, by enlarging or combining local government units or by establishing districts alongside existing local government, is by no means the whole answer to helping people in poverty. Officials of the Department of Health, Education, and Welfare (joint interview) have reservations about the new, large structures; they find that there are substantial values in the small, traditional communities as bases for social action. Because of low density in many rural areas, the problem of making contact with individuals and with families may become more difficult if the seat of action and decision is moved to one center for a large area. Ellis (*18, p. 177*) says that school consolidation is closing small schools which once were focal points of interest and activity. Moreover, he notes that long commuting distances, taking pupils away from home before dawn in winter, and returning them after dark, encourages dropouts. Ellis (*18, p. 189*) also comments that the multitude of Federal aids for rural communities are of no help unless the communities know about them and know how to get them—grantsmanship is an art not readily found among the unorganized people of rural areas.

As another aspect of the same difficulty, Eleanor Eaton of the American Friends Service Committee (personal interview) explained that rural areas are likely to suffer when they are combined with urban areas in district arrangements. The urban areas provide the leadership and resources and take the major benefits, with little gain for the rural communities. She also noted the crucial problem of distance for people without transportation who have to go a long way to get surplus food packages (or stamps) or to reach a hospital or clinic. The problems of distance and contact trouble others as well. Kaye said that OEO is experimenting with bringing people to services and taking services to people. Officials of HEW are experimenting with "outreach" programs and the training of subprofessionals because it is so difficult to find professional people who will spend long hours traveling to serve relatively few people.

Vidich and Bensman (*59, p. 101*) describe another implication of the present system—the habit of dependence. Small rural governments depend on State and Federal money, abdicating their responsibility and autonomy to initiate action on matters for which they cannot get financial assistance. The psychological consequence is a habit of dependence and accommodation to outside control while, at the same time, praising the independent, self-reliant virtues long associated with agrarian and small-town life.

The preoccupation with structure and intergovernmental relationships sometimes conceals basic problems of policy. Programs intended to help those in poverty may fail not because of faulty structure but because those who control local policy oppose the program. HEW officials, in their interview, said that some States refuse to take part fully in Federal programs channeled to or through State government. Officials of the Department of Agriculture who were interviewed said that a number of southern State and local governments refused to cooperate in the surplus food program because it would help Negroes. OEO has the experience, in the South, of community action agencies organized almost entirely by Negroes because white residents will not join with the Negroes. Nonparticipation by local government, and exercise of the governor's project veto power, curtail the total effectiveness of OEO programs in the South.

There is one additional complexity worth noting which affects the relationship of government and people in rural area—this is the interaction between the countryside and the town. Clawson (*14*) and Hoiberg (*25*) explain the strength of this interrelationship. Towns serve farmers as centers for marketing products, purchasing goods and services, and obtaining parts and repairs for equipment. Towns also provide the hinterland with health facilities, field of offices of State and Federal agencies, newspapers, and (in some cases) the legal functions of a county seat. The town may provide a focus for nonagricultural employment both for the part-time farmer and for those who can find no employment in the fields, woods, or mines. Clawson remarks that the size of a town determines the range, quality, and quantity of services, with large towns thereby gaining advantages over small towns. Hoiberg notes the importance of town government services (street maintenance, street lighting, sewerage, etc.) in making the town's facilities and activities fully useful to nontown residents. Both Clawson and Hoiberg draw the conclusion that there is a need for drawing together the town and nontown communities for a more effective whole.

Conclusions

This is the wrong time and place to prescribe changes in the form or responsibility of local government in rural areas. Although this paper has reviewed and evaluated existing conditions in rural government, recommended changes should reflect not only present difficulties, but the program content required to cope specifically with problems of poverty. Recommendations on program content are not now available, however, since the studies on program and on government are proceeding concurrently. The conclusions in this paper must therefore be accepted as tentative, subject to modification if final recommendations on essential antipoverty measures depart substantially from the present overall pattern of programs.

In general, the review of local government in rural areas leads to the conclusion that local government is not performing its role effectively in aiding those entrapped by poverty. The explanations for poor performance include restrictive constitutional and statutory provisions, limited resources, inefficient size, negative policy on aiding the poor (supported by political dominance of the wealthy), and the high cost of providing service to areas of low population density. Possible changes for the improvement of rural local government will be discussed in the following order:

(1) constitutional and statutory revision; (2) transfer of functions; (3) addition or improvement of functions through Federal and state subsidies; (4) increase in size and reduction in number of local government units; and (5) improved response to individual and community wishes.

Constitutional and statutory revision

The Advisory Commission in Intergovernmental Relations (ACIR) has a full and cogent statement of needed reforms (*49, pp. 64–72*). Requirements for the consolidation of governmental units and for annexation of territory by larger governments should be eased; requirements for the division of governmental units, and for incorporation of parts of existing units, should be made more restrictive. Ad hoc or special purpose agencies should be made responsible to the general purpose local government which created them.

ACIR further recommends that townships and municipalities be permitted to transfer operating functions to county governments. By the same token, counties should be permitted to transfer functions to large municipalities. Broader authorization should be granted for two or more local governments to perform functions jointly or cooperatively, and for governments to contract with each other for the performance of administrative or operational services. ACIR also recommends that States generally enlarge the powers and responsibilities of counties, allowing them to undertake any of the functions usually assigned to township or municipal government. Where services are provided for only a portion of a county, it should be permissible to establish special districts or service corporations, financed by user charges, but responsible directly to the governing body of the parent county.

With respect to form of government, ACIR suggests much greater freedom of choice for local government. It is especially important to provide the option of a form with a strong executive since the commission and weak-mayor forms mix legislative and executive responsibilities, weakening the management role, and confusing the voters. The number and diversity of local government officials chosen by election should be sharply reduced; only the mayor and council (or equivalent) should be elected, other officers should be appointed.

ACIR further recommends that States enact grants of power for local government in broad terms on the assumption that local government will be more responsive to popular control and wishes if governmental authority can be extended to meet evolving needs. ACIR also suggests that State grants of power to local government include the general grant of all powers and functions not expressly reserved to the State—a reversal of the present limitation which reserves to the State all powers not expressly conferred on local government.

Although other authors may differ in detail with ACIR, there is a general consensus on the direction and urgency of change in State constitutional and statutory restrictions. To the extent that restrictions are imbedded in constitutions (as many of them are), change will occur very slowly. It also seems likely that States will be very resistant (probably with good cause) to the ACIR recommendation for a general grant of powers to local government.

Transfer of functions

Almost all of those writing on the problems of small local government include transfer of functions as one device for improving scale of operations, tax resources, and service efficiency. The transfer can occur in two ways: first, a small government may contract with another (usually larger) government to provide services for a specified charge; secondly, a larger overlapping unit of government may take responsibility for performing services commonly performed by smaller constituent units. Both types of transfer depend on statutory or constitutional change in most States.

The contractual arrangement works well if the small governments feel the need to provide (or provide for) particular services, and if they are also able and willing to pay the services charge. Although the service charge may be substantially less than the cost of providing the service directly, the service charge still costs more than not providing the service at all.

When county government takes responsibility for services usually performed (or authorized but not performed) by municipal and township governments, the county governing body decides on the scope and quality of service on its own initiative. The county governing body can relate the services to total county needs and total county resources. Under contractual arrangements, however, the community most in need may be too poor or too apathetic to enter the agreement, and the community with the largest resources may prefer to keep its tax money at home.

Widespread transfer of responsibility for major services from townships and municipalities to counties would radically change the scale of operations. There are 19,000 townships and municipalities with less than 1,000 population, but only 18 counties that small; there are 34,000 townships and municipalities with less than 10,000 population, but only 800 counties in that size group. Counties also operate with much less part-time employment than do municipalities and townships in rural areas, and it seems likely that expanded functions at the county level would further reduce the amount and proportion of part-time work. Strengthened county operations would also fit the present pattern of Federal and State grants to local government since counties receive more grant money at present (1962) than municipalities and townships combined.

Although transferring services may improve the quantity and quality of service, one must admit that this is not a tidy device. There would still remain tens of thousands of small governments with officials, powers, taxes, and political voices. Tidiness is hardly an overriding virtue, however, and might well be traded for a faster and more attainable improvement than seems likely with a tidier arrangement such as consolidation. There is also a lingering doubt as to the advisability of extinguishing the old, traditional small government which may serve the poor as a better political focus than the county.

Addition or improvement of functions through Federal and State subsidies

It would be difficult to overstate the vital importance of Federal and State funds in supporting and initiating local government activities essential to the well-being of the community as a whole and of the disadvantaged members of the community in particular. Education is a good example of a traditional function of local government which is improved through grants; renewal of dilapidated housing and construction of water or sewer facilities are activities often beyond the means of rural communities without financial aid.

The wide variety in Federal-State-local government channels used in putting subsidy money to work has already been discussed. There are differing opinions on the relative merits of different channels, but there is little general theory on relationship between the method of distributing grants and impact on local government administration or politics. In a provocative monograph on research needs, Stocker says that grants and subsidies will surely induce changes in the formal organization of local government (*44, p. 15*). Stocker believes that changes may tend to improve local government by requiring adaptations which spur more general revisions of government structure, powers, and operations. But Stocker also notes that grant programs can be harmful to local government if, for example, the grants bypass existing governmental forms to establish single-purpose districts which vitiate the strength and influence of general-purpose governments.

A similar caution or criticism is attributed to Morton Grodzins (*47*). In a discussion of the Department of Agriculture's extension services (*p. 34*), Grodzins claims that the Department ignores local government, providing a parallel structure through its locally elected farmer committees. The committees are more responsive to the farm-owner-dominated Farm Bureau than to the residents as a whole. Since the extension agencies often spend more than county government does, Grodzins argues that county government is disadvantaged in competing for leadership, support, and administrative talent.

The better way of using grants is to strengthen local government, and perhaps to guide it toward deliberate change. The Department of Agriculture is moving in this direction with its Technical Action Panels, providing a resource and guide to many grant programs, including those outside of the Department. The President's Executive Order, expressed in a Bureau of the Budget Circular (*51*), also recognizes the need to link Federal and State planning and action districts, and to provide State and local government with a more orderly structure of Federal assistance programs. Grants which require or reward joint action by local government, or concurrence of local programs with regional plans, exert pressure for shifting authority toward larger operating units of government.

A strong relationship between State and county government, affirming the separate but interacting roles of the two levels, has been well stated (*21*). The report defines the State's basic responsibility for establishing common goals while individualizing program structure, methods, and components to fit the specific needs and capabilities of individual counties (*pp. I-19-21*).

Most grant programs elicit participation or compliance of local governments by the principle of the carrot. Sometimes the carrot is not enough: local governments may refuse to recognize the problem, they may be unwilling to provide whatever local resources are necessary, and they may disagree with the basic policy objective of the program. Pennsylvania has therefore combined the carrot with the stick. The "Mental Health and Mental Retardation Act of 1966" (Act No. 6, September 28, 1966) directs counties to establish a wide range of services and facilities. To sweeten the pill, the State agrees to pay 90 percent of additional costs incurred by counties. If any county fails to provide services in accordance with the act, section 511 states that the Department of Public Welfare will provide the services, charging the county for the local share of cost plus 15 percent to cover the State's administrative expenses.

The use of grants to induce or coerce specific kinds of action is currently under heated debate. The issue is aggravated by the variety of channels used, bypassing some levels of government (or bypassing government altogether). The objections center on differences in policy among the levels of government. The granting agency usually wants reasonable assurance that the money is being used for the purposes of the grant; the receiving agencies want more freedom to decide how to use grant funds. States would like to have all grant funds channeled through them, but many local governments fear that States will interject unfavorable policies and restrictions (especially with relation to urban renewal and development for large cities in States with rural legislatures, and with relation to antipoverty and related programs involving minority groups in States with negative policies toward the problems of Negroes and other minorities). On the whole, in this argument, it seems best to provide grants with controls to assure their use for the intended purposes, but to allow more freedom in the details of application. In programs involving sensitive social issues (such as aid for minorities), the donor agency should have the option of using the State-local channel if that channel works, or of bypassing the channel if the program is being obstructed.

Increase in size and reduction in number of local government units

Almost every work on rural government grapples with the possibility of reducing the number and increasing the size of governmental units in order to obtain greater efficiency, more proficient staff, enlarged resources, a broader mix of political views and interests. The Committee for Economic Development is unequivocal in recommending consolidation of governmental units on a vast scale *(16)*. Pages 39-43 of the report contain the suggestions for rural areas. The Committee believes that rural counties could operate "more effectively" with a population size of 50,000; the number could be less in areas of low population density where the limit might be fixed by 1- or 2-hour travel time to the county seat. The boundaries for the consolidated units would reflect trading areas, drainage patterns, and similar features. The Committee also suggests that New England towns should consolidate (to larger, but unspecified, size), and that small municipalities and townships elsewhere should be eliminated (with counties performing the basic local government services). School districts should be combined to reach a minimum size of 1,500 pupils.

It is unfortunate that the Committee for Economic Development took so little pains to reinforce its bald recommendations with systematic supporting evidence. The case is argued "logically," but not defended with authoritative references or with analytical data. Perhaps the most cavalier statement in the report *(16, p. 40)* gives "various studies" as the basis for selecting a 50,000 population goal, without identifying the studies in a footnote or bibliography.

More careful students of the consolidation issue are more cautious than the Committee for Economic Development. Boles and Cook *(11)* report that the greatest saving in per capita cost occurs when population reaches 100,000 to 110,000. But they conclude that dollar saving is not the determining factor in reducing the number of counties and that consolidation is unlikely to occur. The County's key position in the political party structure is among the powerful obstacles to change.

Grant *(22)* has a convincing statement on the failure of county consolidation in contrast with the relative success of school district consolidation. In listing the sources of opposition to county change, he notes that many rural families identify the family history and name with their county after generations of residence. County office holders object to losing their positions as a matter of course. But Grant also comments on the powerful opposition to consolidation by merchants, lawyers, and other business interests located at the county seat; not the least of these interests is the county-seat newspaper which derives substantial income from legal advertisements. Finally, the wealthier counties strongly oppose consolidation on the clear-cut expectation that taxes will go up when they are joined with poorer neighbors.

Turning to the relative success of school district consolidation, Grant remarks on the essential leadership role taken by professional educators from State departments of education, teacher colleges, and the larger school districts. The large sums of money involved in State subsidies to school districts also created pressure for obtaining the efficiency of enlarged units, while offering enticing rewards for compliant districts. Subsidies for pupil transportation and for school construction eased two of the most obvious shocks of district consolidations.

Almost as an afterthought, Grant comments that consolidation of township government is nearly as difficult as consolidation of county government. He notes, however, that some gain was achieved when Oklahoma withdrew taxing powers from townships and Iowa transferred the powers of township governments to the counties.

By and large there is a consensus that local government would be more efficient and more effective if units were larger. The optimum size varies from 20,000 *(29)* to 50,000 *(16)* to 100,000 *(11)*. Except for school districts, there is little reason to expect that consolidation will occur voluntarily or by fiat of State governments. In comparison with the transfer of functions or the use of grants, consolidation ranks a poor third in terms of practicality.

Improved response to individual and community wishes

Most of the recommendations for improving local government in rural areas imply a larger scale of operations—larger populations, larger geographic areas. There are many who fear that the change in scale will add to the hardship of the least fortunate members of the community by adding distance and unfamiliarity to their contacts with governmental agencies. James Sundquist (personal interview) argued strongly for recognition that action requires close contact with the people involved. Very small communities should not lose their identity since they are the focus of political and social action. This does not mean that every small place needs a full range of governmental services, but the larger governmental unit should use the traditional community as its focus of activity.

Several other authors express this same point of view in urging as a general principle that functions of government belong at the "lowest" level at which the function can be effectively performed. The Government Consulting Service espouses this view *(21)*. Officials of the Federal agencies interviewed for this study expressed related concerns in their attempts to find new ways to bring people to services and services to people.

Nesmith *(34)* represents a number of writers emphasizing the close interrelationship between town centers and their surrounding hinterland. All of those who discuss this situation agree that governmental programs should recognize and strengthen the relationship through planning and operating activities. Nesmith has some useful figures on the minimum size for an urban center, based on careful work by other specialists. A reasonable school system can be supported by a total population of a little over 6,000; a supermarket needs almost 7,000 people and other types of business vary from 1,300 for a grocery, to 2,700 for a men's clothing store, and 6,700 for a hardware store; 5,000 population is a reasonable figure to support a library and five churches. Clawson would probably set a higher minimum to achieve a wider range and better quality in goods and services.

The point is, of course, that all our efforts to rethink and revise the structure and operation of local government are means to the end of providing services to people. Larger governments may be more efficient, but the increased efficiency will be a net loss if government becomes more bureaucratic, more remote, less sensitive to real needs. It does not follow, however, that larger size necessarily means less concern and less contact wtih individuals who are physically, economically, or socially isolated. A large government does not have to organize its services in a centralized location; a dedicated professional may work harder than a discouraged or cynical small-town political leader to reach all those who live in poverty. The problems of rural poverty urgently require the utmost in creative response by every level of government.

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ACKNOWLEDGMENTS

The authors acknowledge the assistance of Harriet Johnson and Arnold R. Post in the preparation of this paper.

Chapter 8

Patterns of Urban Growth and Growth Nodes

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During the 19th and early 20th centuries, the relative growth rate of various American cities could be easily estimated by counting the number of persons residing within their borders. As cities' populations increased, their growth took place through building upward, increasing the density of existing structures, and building in previously unimproved land within the city's borders. In the past several decades, the pattern of urban growth has shifted, in that the territory within the city is filled, and growth has continued through suburbanization. Not only has new residential construction taken place in the suburbs outside city limits, but many business firms have located outside the central city. Of the 18 cities with over 500,000 population in 1950, only 4 experienced population growth between 1950 and 1960. Yet these total populations, including suburban developments, increased rapidly. The metropolitan areas of the mid-1960's extend well beyond the central city limits, and most metropolitan growth is taking place outside the central city. For this reason, the census has adopted the concept of the "Standard Metropolitan Statistical Area" (SMSA). In the words of the census: [1]

> . . . for many types of social and economic analysis, it is necessary to consider as a unit the entire population in and around the city where activities form an integrated social and economic system . . . An SMSA is a county or group of contiguous counties which contain at least one city of 50,000 inhabitants or more or "twin cities" with a combined population of at least 50,000. . . . Contiguous counties are included in an SMSA if, according to certain criteria, they are essentially metropolitan in character and are socially and economically integrated with the central city . . .

Table 1 presents data on the relative importance of the large SMSA's. For the period 1900–1950, over three-fourths of the increase in the American population was accounted for by the growth of the 162 metropolitan areas designated by the census in 1950 as standard metropolitan areas (SMA's). These figures are somewhat misleading, of course, since some of the 1950 SMA's were small towns in 1900, and have experienced phenomenal growth in the interim. Even so, more than half the increase in the U.S. population since 1900 occurred in the 52 areas that would have been classified as SMA's in 1900.[2] Moreover, the trend toward increasing concentration appears to have intensified during the 1950–60 decade. In this period, the American population increased by 18.6 percent. The population of the 212 SMSA's of 1960 rose by 26.4 percent, while that of the remainder of the country increased only 3.2 percent.

Table 2 gives the size distribution of the SMSA's in 1950 and 1960. In 1950, there were 15 metropolitan areas with a population in excess of 1 million. By 1960 the number was 24. At the lower end of the size distribution, five areas with a population of less than 50,000 in 1950 had attained a larger size by 1960, and the average SMSA size had increased by 25 percent.

Table 3 presents further evidence of the tendency for large metropolitan areas to grow even larger;

TABLE 1.—*Relative growth of SMSA and non-SMSA areas, 1900–1960*

[Percent population increase per decade]

Area	1900–10	1910–20	1920–30	1930–40	1940–50	1950–60
162 SMA's of 1950	32.0	25.4	27.1	8.5	21.8	26.4
Area outside 1950 SMA's	13.6	6.7	6.0	5.9	6.0	3.2

Source: Donald J. Bogue, *Population Growth in Standard Metropolitan Areas 1900–1950*, Washington, D.C., 1953, p. 13 for 1900–1950. Data are for 212 SMSA's enumerated in the 1960 census. They were derived from Bureau of the Census, *County and City Data Book, 1962* (A Statistical Abstract Supplement), Washington, D.C., 1962, and calculated by the author.

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[2] Bogue, Donald J. *Population Growth in Standard Metropolitan Areas 1900–1950*. Washington, D.C. 1953, p. 14.

TABLE 2.—*Size distribution and population of SMSA's, 1950 and 1960*

Size of SMSA	Number of SMSA's		Population	
	1950	1960	1950	1960
Under 50,000	5	0	203,900	0
50,000 to 74,999	17	8	1,108,181	533,225
75,000 to 99,999	20	14	1,804,641	1,228,182
100,000 to 199,999	72	68	10,101,960	9,835,096
200,000 to 399,999	49	62	13,563,354	17,386,345
400,000 to 699,999	24	28	12,030,914	15,704,931
700,000 to 999,999	10	8	8,138,739	6,678,329
Over 1,000,000	15	24	42,420,715	61,582,070
Total	212	212	89,372,404	112,948,178

Source: Calculations by the author from *County and City Data Book*, table 3.

it gives the percentage distribution of cities in each 1950 size class by their growth rate. Each SMSA is treated as one city. It should be noted that the data on towns in the 2,500 to 4,999 class understate the number of towns which lost population between 1950 and 1960, because towns with less than 2,500 persons in 1960 were not recorded. Even with this downward bias, the pattern emerges clearly. A higher fraction of small towns had low or negative growth rates than the large SMSA's. As size of city increases, the percentage with above-average growth rates (25 percent and over) increases markedly.

"Growth nodes" for present purposes, may be defined as urban areas with population growth rates in excess of 50 percent. As may be seen in table 3, some towns under 25,000 achieved such a rate of growth. In many instances, these were towns adjacent to, but not included in, an SMSA. In other cases, a new military installation, or the advent of a new "footloose plant", generated their growth. It is readily apparent that, should such a growth rate recur for two or three decades, the town would rapidly become an SMSA. Except when the town is located near an SMSA, however, such an eventuality is rare. Perhaps 2 of the 31 towns in the 2,500 to 5,000 size class which grew at a rate in excess of 50 percent have a chance to maintain their growth rate and achieve metropolitan proportions. Even in this class, 20 were located in the South and Southwest—the rapid-growth parts of the country.

Table 4 lists those SMSA's which grew in excess of 50 percent in the 1950–60 decade, with their percentage population increase and their 1960 population. For purposes of comparison, those SMSA's with a growth rate of less than 5 percent are also listed. Of the 30 SMSA's with growth rates over 50 percent, 18 were in Florida, California, and Texas. Two each were in Arizona, Colorado, and Nevada. Only one was located in the Midwest (Wichita), and none in New England or the Atlantic States north of Georgia. The heavy concentration of growth nodes in Florida, the Southwest, and West is evident.

By contrast, of the 17 most slowly growing SMSA's, five were in New England, four in Pennsylvania, several in the central South and Midwest.

TABLE 3.—*Growth rates of SMSA's and other cities, 1950 to 1960*

[Percent of cities in size class]

Size of city in 1950	Growth rate						
	Less than zero	Zero to less than 10%	10% to less than 25%	25% to less than 50%	50% to less than 100%	100% and over	Number in class
2,500 to 4,999	21.7	26.5	29.2	13.9	5.9	2.8	1,135
5,000 to 7,499	24.9	21.9	27.9	17.0	7.0	1.3	470
7,500 to 9,999	19.2	24.0	27.5	21.8	4.4	3.1	229
10,000 to 14,999	18.2	24.1	28.4	20.8	7.2	1.3	236
15,000 to 24,999	18.5	23.6	29.7	16.9	8.2	3.1	195
25,000 to 49,999	20.8	30.4	30.4	10.4	4.3	3.5	115
50,000 to 99,999	5.5	14.0	33.3	25.0	22.2	0	36
100,000 to 199,999	2.7	12.5	36.0	39.0	8.4	1.4	72
200,000 to 399,999	6.1	12.1	43.2	30.4	6.1	2.1	49
400,000 to 699,999	4.0	0.0	32.0	44.0	20.0	0	25
700,000 to 999,999	.0	10.0	30.0	50.0	10.6	0	10
Over 1,000,000	.0	13.3	66.7	13.3	6.7	0	15

Source: Computed by author from *County and City Data Book*.

TABLE 4.—*Growth node and slow growth SMSA's, 1950 to 1960*

SMSA	Population 1960	Growth percentage 1950–60
Rapid-growth SMSA's:		
Fort Lauderdale—Hollywood, Fla.	333,946	297.9
Las Vegas, Nev.	127,016	163.0
Midland, Tex.	67,717	162.6
Orlando, Fla.	318,487	124.6
San Jose, Calif.	642,315	121.1
Odessa, Tex.	90,995	116.1
Phoenix, Ariz.	663,510	100.0
West Palm Beach, Fla.	228,106	98.9
Colorado Springs, Colo.	143,742	92.9
Miami, Fla.	935,047	88.9
Tampa, St. Petersburg, Fla.	772,453	88.8
Tuscon, Ariz.	265,660	88.1
San Diego, Calif.	1,033,011	85.5
Sacramento, Calif.	502,778	81.4
Albuquerque, N. Mex.	262,199	80.0
San Bernardino—Riverside—Ontario, Calif.	809,782	79.3
Albany, Ga.	75,680	73.5
Santa Barbara, Calif.	168,962	72.0
Amarillo, Tex.	149,493	71.6
Reno, Nev.	84,743	68.8
Lawton, Okla.	90,803	64.6
Lake Charles, La.	145,475	62.3
El Paso, Tex.	314,070	61.1
Huntsville, Ala.	117,348	61.1
Pensacola, Fla.	203,376	54.9
Lubbock, Tex.	156,271	54.7
Wichita, Kans	343,231	54.4
Los Angeles—Long Beach, Calif.	6,742,696	54.4
Houston, Tex.	1,243,158	54.1
Denver, Colo.	929,383	51.8
Slow-growth SMSA's:		
Wilkesbarre—Hazleton, Pa.	346,972	−11.5
Scranton, Pa.	234.531	−8.9
St. Joseph, Mo.	90,581	−6.4
Jersey City, N. J.	610,734	−5.7
Johnstown, Pa.	280,733	−3.6
Texarkana, Tex., Ark.	91,657	−3.1
Altoona, Pa.	137,270	−1.6
Fall River, Mass., R. I.	138,156	0.6
Portland, Me.	120,655	0.6
New Bedford, Mass.	143,176	0.8
Lewistown–Auburn, Me.	70,295	2.7
Lawrence–Haverhill, Mass.	187,601	2.8
Terre Haute, Ind.	108,458	3.1
Gadsden, Ala.	96,980	3.3
Huntington–Ashland, W. Va., Ky.	254,780	3.7
Sioux City, Iowa	107,849	3.8
Fort Smith, Ark.	66,685	3.9
Asheville, N. C.	130,074	4.6

Source: *County and City Data Book*, 1962, table 3.

In the more rapidly growing sections of the country, only Texarkana was among the slow-growth SMSA's.

The shift from the Northeast to the South and West has been the result of all the factors discussed in the preceding sections. According to Fuchs: [3]

> The most significant locational trends since 1929 have been the rapid rates of growth in the South and West and the comparative loss of manufacturing in the Northeast. The most important factors influencing these changes in location appear to have been climate, labor and availability of raw materials. What has changed is the technology and importance of aircraft manufacturing, average life expectancy, average income, and the importance of military payrolls as a source of personal income. Climate has been very important in the growth of aircraft manufacturing and subsidiary industries in California and the Southwest. It has also played a role in the location of military establishments and the migrations of population, especially older people. These developments have encouraged the growth of local market-oriented manufacturing industries in several southern and western states, especially Florida and California.

Californian SMSA's have, of course, had the largest increase in number of persons. While there are undoubtedly some older persons who have moved to California for retirement or semiretirement, the development of the aircraft industry has been a major factor. As indicated by Fuchs, the climatic needs of the industry appear to have been important in location of the industry. Once the industry was concentrated there, however, the need for proximity to local suppliers or buyers of component parts was as critical in further expansion as was the climatic factor.[4]

Texas and Florida had climatic advantages. For Florida, increased tourism at higher income levels, and persons moving for retirement have been important. In addition, both States have benefited substantially from the space program, and the development of local industries to service it. The Pacific States and Florida also gained from defense purchases.[5] Texas and the Gulf Coast States have also experienced rapid growth of the chemical industry, largely because of the availability of raw materials,[6] and in particular, the changing technology of the industry which implied increasing reliance on petrochemicals.

These, and other shifts, have been the subject of extensive research. Extensive examination of all the detailed factors involved in each individual growth node is beyond the scope of this paper. For the growth node SMSA's, the location requirements of some industries dictate the choice of site. Once one or several industries choose a location, the development of market-oriented industries and services follows. The choice of location between several cities meeting locational requirements may initially be arbitrary. Once suppliers and buyers have established themselves in a given location, later entrants may have little choice but to follow suit. As long as there are growth industries, technological changes, and the other phenomena associated with economic growth, there will be growth nodes. They may be different metropolitan areas, in different sections of the United States, and with different characteristics, but the changing patterns of industrial development will insure that some areas grow at rates far exceeding the national average.

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[3] Fuchs, Victor R. *Changes in the Location of Manufacturing in the United States since 1929*, New Haven: Yale Univ. Press, 1962, pp. 27–8.

[4] There are, of course, exceptions. Aircraft has also developed in several other areas, most notably St. Louis.

[5] For an analysis of the impact of defense purchases, see Roger E. Bolton, *Defense Purchases and Regional Growth*, Brookings, Washington, D.C., 1966.

[6] Fuchs, *op. cit.*, p. 254.

Conversely, the same set of factors will insure that there are some slow-growth SMSA's and many small towns experiencing population declines. In New England, the primary factors appear to have been New England's specialization in slow-growth industries which found the attraction of cheap labor in the South sufficiently great so that a change in location was cost saving. Pennsylvania's slow-growth SMSA's appear to have resulted from the same constellation of problems affecting all of Appalachia—rapid productivity growth and slow demand growth in coal mining. While, by chance, the rapid-growth sectors might have found a northeast location economically desirable, the technological needs of the industries were better met elsewhere.

While there will always be differential growth rates among regions and metropolitan areas, there is some evidence that, as economic growth continues, the degree of disparity among rapid- and slow-growth regions and SMSA's may diminish. This is partly the result of the increasing market-orientation of many economic activities, both because of the rise of the service sectors, and because of the tendency for new products to be less raw-material oriented. Hence, as new products and services are developed, or become increasingly important, they may well expand in each region with a sufficiently broad market to warrant a separate plant. As the size of the metropolitan areas increases, more and more SMSA's will reach the minimum size where a separate production facility is economically desirable. Such a tendency would also increase the concentration of the American people in the large cities, and lead to a greater disparity in the locational advantages of the large and the small urban areas. Finally, of course, as the growth of the large metropolitan areas continues, there will be a smaller and smaller proportion of the American population residing outside these areas, and hence, a decreasing base from which the SMSA's can attract migrants.

Chapter 9

Patterns of Regional Economic Development in the United States, and Their Relation to Rural Poverty

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In this paper, I shall first present a broad historical review of the economic patterns of growth and development in regions of the United States. In the second part of the paper I shall examine alternative policy proposals in the light of such experience. The review will serve the following purposes: It will describe the economic factors influencing the geographic movement of labor and capital; it will demonstrate that such resource movements have been consistent in the main with the efficiency goals of the national economy; it will provide guidance in the formulation of policy designed to help the rural poor.

Economic Growth and Decline Among Major Regions of the United States[1]

Historically, the following regularities in growth patterns have occurred among regions of the United States:

(1) There has been a convergence of per capita personal incomes among States since 1880. This means that the differences among States in levels of income per capital have narrowed sharply over time.

(2) There has been a stable pattern of growth in manufacturing employment among States since 1869. Some States have persistently grown more rapidly than others.

(3) There has been a stable pattern of growth of nonagricultural employment and of the capital employed in nonagricultural industries. Again, some States have persistently grown more rapidly than others.

(4) Certain States have experienced absolute declines in employment. Many of the depressed areas as identified by various government agencies are clustered in these declining States.

The convergence of per capita incomes among States is explained in part by the fact that resources within States and regions have become more efficiently allocated over time. An efficient allocation is one which provides the highest income to resources in the sense that returns are equalized at the margin. A shift of labor or capital from low- to high-paying occupations produces an increase in income. The growth of personal income per capita has varied among States by the extent to which resources were initially misallocated, and the extent to which this misallocation was eliminated. Resource misallocation may be measured by the initial differential in income paid to labor among the various sectors of each State, and by the initial concentrations of employment in the lowest paying sectors. In the United States, in the late 19th century, income per worker was initially lower in agriculture than in nonagricultural pursuits. The subsequent pattern of growth of per capita income has been associated with the shift of human resources out of agriculture and with the gradual narrowing in the differentials in earnings per worker between rural and urban occupations.

Historically, resources first moved into American agriculture as part of the pattern of settlement of the country. The economic incentives were cheap land and the prospects of accumulating capital by the use of family labor. The effect of this settlement was a dramatic rise in the volume of production of agricultural commodities. Subsequently, a number of market forces came into play which lowered the demand for labor in agriculture. Chief among these were improvements in technology and a low income elasticity of demand for agricultural products. Thus the growth of agricultural output was accompanied by a deterioration in agriculture's terms of trade with the urban sector of the economy. A third factor affecting the return of agricultural labor is the phenomenon of higher than average birth rates among rural inhabitants. People living on the farm have reproduced much more rapidly than people living in the city. All three factors together have produced a flow of labor from farm to city. The data on per capita incomes among States indicate that this flow has resulted in increasing per capita income. As workers shifted from farm to nonfarm activities, incomes rose more rapidly than they did in areas which did not experience such sectoral shifts.

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[1] Material in this section is found in Borts and Stein (*2*, Ch. 2, 3, 4, and 5). (Italic numbers in parentheses indicate references listed at the end of this paper.)

For verification it is useful to examine the growth of per capita incomes among States classified by the following attributes: (a) ratio of nonfarm to total employment; and (b) ratio of farm wages to nonfarm wages. The States may be divided into four groups having various combinations of the two attributes.

Ratio of farm wages to nonfarm wages	*Ratio of nonfarm to total employment*	
	Above average	Below average
Above average	A	B
Below average	C	D

The preceding discussion has led to the conclusion that per capita income would grow most rapidly in the D States and least rapidly in the A States. The reason is that resources would reallocate over time in the D States from low- to high-paying occupations. This is exactly what has happened. The simple average growth rate of per capita incomes is shown below:

Group	*1880–1900* (*percent*)	*1900–20* (*percent*)	*1920–50* (*percent*)
A States	26	27	47
D States	46	57	76

The identity of the two groups of States is consistent with the description of the reallocative process. In the main, the A States are industrial, while the D States are rural. Note the persistent identity of the two groups over a 70-year time span.

A States

1880–1900	*1900–20*	*1920–50*
Maine	Maine	Maine
New Hampshire	New Hampshire	New Hampshire
Massachusetts	Massachusetts	Massachusetts
Rhode Island	Rhode Island	Rhode Island
Connecticut	Connecticut	Connecticut
New York	New York	New York
New Jersey	New Jersey	New Jersey
Pennsylvania	Pennsylvania	Pennsylvania
Delaware	Delaware	Delaware
Maryland	Maryland	Maryland
Ohio	Ohio	Ohio
Illinois	Illinois	Illinois
Idaho	Michigan	Michigan
Nevada	Montana	Nevada
California	Wyoming	Washington
	Colorado	Oregon
	Utah	California
	Nevada	
	Washington	
	California	

D States

1880–1900	*1900–20*	*1920–50*
West Virginia	West Virginia	South Carolina
Georgia	Georgia	Georgia
Florida	Florida	Kentucky
Kentucky	Kentucky	Tennessee
Alabama	Tennessee	Alabama
Louisiana	Alabama	Mississippi
Texas	Mississippi	Arkansas
Missouri	Arkansas	Louisiana
North Dakota	Louisiana	Indiana
South Dakota	Texas	Missouri
Nebraska	Missouri	
Kansas	New Mexico	
New Mexico		

Economic Effects of Intraregional Resource Movements

In this section attention is shifted from variations in per capita income to the overall growth in a region's level of economic activity. This activity may be measured in the same manner as national activity, by the use of a gross product concept. For the region the measure is termed gross regional product. It consists of the value of output of goods and services produced in the region plus the income paid to residents of the region from resources they own that are employed outside the region. These two components are influenced by different factors and are handled separately. The next few sections concentrate on income produced.

The movement of resources out of agriculture has stimulated the growth of nonagricultural economic activities. Studies indicate that regions which experienced the greatest shifts of labor from agriculture also enjoyed the most rapid rate of growth of employment in manufacturing. The result is more than a statistical artifact. There is no necessary relationship between the movement of resources out of agriculture and their location and reemployment in the same region. It is possible for resources to leave agriculture in one region and move to nonagricultural activities in another. The intraregional shifts of resources from agricultural to nonagricultural activities have provided a particular stimulus to manufacturing. The rate of growth of manufacturing employment in specific industries has been higher in States undergoing the shift of resources from farm to nonfarm activities, where agriculture was initially a very large proportion of total economic activity. A primary influence on the growth of manufacturing employment among States has been the availability of a growing labor supply.

While manufacturing growth is related to labor supply shifts, it does not appear to vary with wage level differences among States. The reason for this is that the wage level appears to have two counterbalancing effects on the rate of growth of employment. Low wages will attract industry because of their effects on the rate of return on capital. Capital is attracted to a State where there are low wages, and as capital flows in it generates a demand for labor. Thus, one should generally find that low wages are positively related to high growth rates of capital. Low wages also lead to an emigration of labor out of the State. Labor flows from low wage States to high wage States. As a result, emigration reduces the available labor supply to an industry at any wage rate and tends to discourage the movement of capital into an area. What has taken place is a race between the movement of capital into low wage areas and the movement of labor into high wage areas. This race, which has been set off by the shift of labor out of agriculture into other occupations, has been consistent with the movement of the economy to a more efficient allocation of resources.

A related change in resource allocation has occurred in more developed regions. The growth of certain manufacturing regions in the Northeast was partially stimulated by the movement of labor from the rural areas of the same region and by the migration of labor from Canada and Europe. By the second and third decade of this century, these sources of labor had become quantitatively unimportant. At the same time, one observed the development of technological innovations permitting the use of lower quality-lower wage labor in certain industrial processes, the movement of low wage industry out of the Northeast, and the gradual predominance in the Northeast of high wage industries.

Interregional Migration

The migration of labor between regions plays as important a role in explaining growth patterns as the previously discussed internal reallocation of labor. Prior to 1920 there were two types of migration of importance in the United States: between regions, and from Canada and Europe to the United States. With the passage of the Immigration Act and its enforcement in the middle 1920's, foreign immigration dwindled as a percentage of all migration. After the middle 1920's there was a qualitative change in migration's influence on regional growth patterns. Foreign immigration had provided a stimulus to the economic growth of the northeastern part of the United States. The cessation of foreign immigration was an important factor in the departure of low wage industries from New England, Upper New York State, and Pennsylvania. Migration of people from the South toward the Northern and Western States took on new importance, and as a consequence the relative economic growth potential of the West increased.

Historical evidence on interregional migration includes a large amount of information on net migration, and smaller amounts on gross migration. The figures on net migration indicate in the main that people moved from States where wages were low to States where wages were high. The migration of labor into a State is a clear indicator of the shift of the labor supply function facing economic activities in the State. The reason is that migrants consist to a much greater degree of people of working age than the rest of the resident population of the State. In fact, migration differences account for a good deal of the differences of manufacturing employment growth among States in the period between 1920 and 1950.[2]

A word of caution is needed here because migration is influenced by other factors in addition to wage rates (*19*). Not all high wage States received migrants from low wage States. There are important noneconomic factors influencing migration and these must be recognized in accounting for regional growth differentials. For example, the migration into such States as Florida, New Mexico, Colorado, Texas, and Virginia may not be related to wage differentials, while the high migration into California, Arizona, and Nevada may be due only partly to high wages. Second, high wage States such as Massachusetts, Pennsylvania, and Wisconsin experienced outmigration during substantial portions of the period between 1920 and 1950.

A more refined analysis of migratory patterns between standard metropolitan statistical areas has been undertaken recently by Lowry (*11*). His study attempts to split apart the directional migratory flows between metropolitan areas. He provides different explanatory variables to account for immigration and emigration. Lowry argues that emigration from an area is largely a demographic phenomenon in the sense that some age groups are more prone to migrate than others. While the age sensitivity to migration ultimately may be due to economic factors, such factors do not vary with different regions of the country. According to Lowry, emigration per 1,000 would be roughly the same throughout the country, if the age distribution of the population were the same. The chief difference in net migration is therefore accounted for by inmigration. Lowry argues that migration into a metropolitan area is related to economic factors which vary between regions: the wage rate in the area receiving the migrant; the level of unemployment in the area; and the degree to which the area's population is dependent upon military employment. Another variable, which Lowry takes into account and which appears to play a role in migration decisions, is distance. The greater the distance which separates two metropolitan areas the smaller the likelihood that people from one metropolitan area will migrate to the other. The role of distance is presumably related to information and transportation costs as well as to the proximity of members of the migrant's family or social and ethnic group. These influences on migration provide important clues to correct policy measures for helping the rural poor.

Migration among States has taken place side by side with the intrastate movement of population from farm to city described above. The economic factors producing the intrastate movement have also played a role in the movement between States. In the main, States which experienced the intersectoral shift (the D States of the tabulation) also lost population through migration. On the other hand, 12 of the 17 A States had net immigration during the 1930–50 period.

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[2] Despite the fact that immigration is associated with population growth and with wage rates, there is very little association between manufacturing employment growth and wage rates. The reason is, as stated earlier, that wage rates have an ambiguous influence on manufacturing employment growth.

Supply and Demand Factors in Regional Growth

A number of possibly conflicting hypotheses have been put forward to explain why some regions have grown more rapidly than others. These explanations fall under the heading of demand and supply factors. It is important in the formulation of public policy to know which of these explanations are relevant and useful.

The Demand Hypothesis

The demand hypothesis explains regional growth on the basis of the demand for the region's products which are exported to the rest of the country. This hypothesis holds that a region grows more rapidly if the national demand for its export products rises more rapidly than the demand for the products of other regions. Presumably, the regions differ in the structure of their exports because of differences in resources, location, and transport facilities.

The demand hypothesis is also used to explain regional patterns of migration. It has been observed that, other things being equal, migrants will be attracted to high wage areas and to areas of low unemployment. Thus high wage regions are stimulated to grow more rapidly than low wage regions. It is argued that both types of regions are in fact acting out the demand influences exerted upon them in the national markets for goods and services. High wage regions are presumably enjoying rapidly growing demand for their exports—thus the high wages; while low wage regions are suffering falling demands for their exports—thus the low wages.

It is not a simple matter to conduct statistical tests of the demand hypothesis because of the possible ways in which demand can have an effect on regional output and the regional allocation of resources. Nevertheless, it is fair to state that the tests conducted indicate that such a hypothesis holds only in the very short-run period. Over long-run periods of time, it appears that the demand hypothesis does not play a role in explaining regional economic growth. This does not mean that one observes the occurrence of rapidly growing regions in the face of declining demand for their export commodities. What it does mean is that the exports of rapidly growing regions generally do not enjoy supernormal growth in national demand. In fact, the export industries in rapidly growing regions have grown more rapidly than their national counterpart industries. In addition, the rapidly growing regions have not contained industries which were experiencing the most rapid rates of national demand. Thus, historically, as an explanatory factor, demand phenomena do not play a very strong role.

Caution must be observed in utilizing such historical experience. There is no claim that demand is unimportant in regional growth. One of the easiest ways for public policy to stimulate the output of a particular region is to engage in activities that raise the demand for those products. There is no question that when the military sector demands more aircraft, it provides a specific economic stimulus to regions where aircraft are produced.

The findings indicate, however, that it would be a mistake to project the growth of regions in the future on the basis of the possible growth in the national demand for the commodities they export. It would be a mistake to attempt to identify the most rapidly growing regions in the future in terms of what is likely to be the national pattern of demand for certain nationally traded commodities. Nationally traded export commodities may be produced in many regions, and the present regional composition of export output does not provide a basis for predicting future regional growth. The national market for regional exports is so broad that no region has reason to be concerned with the long-run growth for particular export commodities. The basis of concern should be the flexibility of resource use to permit resource shifts when and if demand changes occur, and to permit resource shifts to take advantage of superior earning opportunities.

The policy implications of such findings are also of interest. The national market for regional exports is so broad that planners would be ill advised to worry about the available overall market for potential regional exports. Market studies are still required to identify a region's cost advantages and its best export bill of goods. Nevertheless, a wide range of transportable commodities can be sold almost anywhere and can be produced almost anywhere.

There is a second interpretation to the concept of export demand. Regional economists sometimes speak of the demand for a particular region's product. They are thinking of a net or derived demand concept, where the demand is the difference between national demand for a product and the amount of that product supplied to the national market by all other regions. Thus it is said that New England's decline is due to a decline in the demand for textiles and shoes, or Pittsburgh's decline is due to a decline in the demand for steel, cement, and glass. These statements are made in the face of the fact that there is a growing national demand for textiles, shoes, steel, cement, and glass. The proper interpretation is that New England is losing its share of the national textile and shoe markets, while Pittsburgh is losing its share of the national steel, cement, and glass markets. The reasons are to be found in the cost and supply factors particular to the regions that are losing and gaining shares.

The Supply Hypothesis

If national demand factors do not appear to play a role in explanations of regional economic development, what can be said about supply factors? Historically, supply factors appeared to have been very important in explaining regional growth differentials. As indicated, an intrasectoral shift of productive resources has taken place within certain regions leading to growth of nonagricultural activities. This shift has been accompanied by an increase in the per capita income of the region and an increase in its overall level of economic activity. The reason for the increase in the overall level of economic activity is that the shift has attracted capital outside the region into nonagricultural activities. The consequence is that regions which started out with a very large proportion of resources in agricultural activities have experienced correspondingly high rates of growth in nonagricultural employment and output. Such regions have over time attracted considerable amounts of capital from other regions to take advantage of investment opportunities in the nonagricultural sectors. They are debtors in terms of their balance of payments position with other regions. Their investment opportunities have led to more capital formation than could be financed by domestic savings. The result is net borrowing from the rest of the country to take advantage of investment opportunities. The identity of the borrowers is familiar. If one looks at the D States of the tabulation, all but Missouri are debtors. Among the A States, 10 of the 17 are creditors (*17*).

A later section will show that the resource pattern described for the D States overlaps markedly with the incidence of rural poverty. It is likely that the rural poverty which presently exists in such States arises because of the failure of the process to be completed. The forces which gave rise to the changes described earlier have also generated rural poverty. A large number of families have not yet responded to the incentives of the market.

Demand, Supply, and Migration

As noted earlier, proponents of the demand hypothesis claim a relation between export demand, high wages, low unemployment, migration, and regional growth. While such a set of connections is an intellectually attractive approach to regional growth, there is little empirical confirmation. For one thing, there is little relation between wage levels and the demand for exports of various regions. In some periods, national demand appears to concentrate on high wage goods, in other periods it concentrates on low wage goods.

In addition, most of the empirical work on regional wage differentials contradicts the notion that demand factors are at work. Regional wage differentials have been explained in terms of the industrial composition and the product mix of the region's output, and in terms of the educational composition and the quality differences in the region's labor force (*7, 16*). If these factors were solely responsible for regional wage differentials then such differentials would provide little explanatory power for migration phenomenon. An individual who possessed a given combination of educational and skill attributes could find the same income level no matter the region in which he worked. To the extent that regional wage differentials reflect compositional factors they can hardly explain patterns of migration. Still less can they be said to reflect patterns of national demand for regional exports.

In fact, composition effects do not provide a complete explanation of regional wage differentials. The differentials which remain over and above such composition effects are strongly related to migration patterns, confirming the view that migrants are attracted by higher earnings. Our own findings indicate that a large part of the explanation for regional wage differentials is the extent of misallocation of labor between agriculture and urban occupations. Urban wages will be lower in regions where a large supply of farmworkers is steadily leaving rural areas for the city. A second but possibly related explanatory factor is the size of the market for certain types of high-salaried urban occupations. Larger cities are more productive economically than smaller cities in the sense that the size of the market presents a high degree of personal specialization. The average income of professional workers increases with city population when these variables are arrayed against each other. The degree of concentration of the urban population into large cities is thus a second explanation for wage differentials. As noted, however, city size may be related to the farm labor market because farm regions lack large cities.[3] The first of these explanations leads to the expectation that workers would be attracted out of regions where low wages are paid. Workers leaving the farm are likely to move first to nearby urban areas. They next seek higher economic opportunity and expanding employment by moving to those areas paying higher wages, which have more rapidly growing economic opportunities.

There remains an apparent element of circularity in the explanation which needs clarification. We have stated that migration represents a shift of the labor supply curve, insuring that employment, particularly in manufacturing, will grow more rapidly than in other areas which do not receive migrants, and which do not have a group of exfarmers to relocate. These statements imply that regional growth differentials are in part caused by regional migration. What causes the migration? The answers are relatively higher wages, proximity to the migrants' area of origin, and low unemployment rates. Why then do some high wage areas grow more rapidly than others? The answer in part is that some high wage regions have in the past experienced enough unemployment to discourage potential migrants. For example, during the 1950's high unemployment in New England and certain Middle Atlantic cities discouraged immigration. These unemployment rates reflected the increased competition from southern industry; southern industry grew because of the intersectoral labor force shift. Thus the movement of labor off the farm set into motion a chain of consequences which made some high wage regions less attractive than others. High wage regions attract population when there is a prospect of continued economic growth. In addition, migrants choose among high wage areas by noneconomic considerations such as climate and proximity to amenities of living. Much of American economic activity has become footloose with respect to location of natural resource inputs and transport distances to market. Such industries can follow the whims of a high skill labor force in its locational decisions.

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[3] For an analysis of the relations between income and city size, see Mansfield (*12*) and Fuchs (*5*).

Debtor and Creditor Regions

As indicated earlier, the gross regional product consists of the income produced by resources employed in a region plus the income earned by the resources owned by residents, but employed outside the region. For the most part, this latter category of income consists of the income on capital which has been invested outside the region. There may be some small amount of labor income in this category as well because of intraregional commuting patterns at the boundaries of a region. The labor income component will be ignored, however, as it depends on geographic commuting patterns and is explained by factors which explain the produced income of a region. The income on outside investment may be a positive or negative element. When the region has been a net borrower from other regions, there is a net payment of income to outside lenders, which is subtracted from the region's produced income to arrive at the gross regional product. When the region has been a net lender to other regions, there is a net receipt on the income from this investment, which is added to the region's produced income to arrive at the gross regional product.

A region becomes a net lender to other regions when the savings generated by its households exceed the investment of capital which occurs in the region. Conversely, the region becomes a net borrower when the investment exceeds the savings generated by households. In general, the following factors influence the debtor-creditor status of a region: First, recently settled and developed regions tend to be debtors because investment exceeds savings capacity. The political conflicts in the 18th and 19th centuries between debtors and creditors reflected this regional identification, with the older areas of the country lending to the newer. Second, the more rapidly growing regions tend to be borrowers from the slower growing. The reason is that investment demand in a region is influenced by the growth of population and industry. Third, regions tend to be borrowers if they have an industrial makeup which requires large amounts of capital per unit of output. The reason is that capital intensive industries require more investment when expanding than do labor intensive industries. Fourth, regions tend to be borrowers if their households do less saving than households in other regions.

The above factors have produced a familiar pattern of debtor credit relations among regions. The older industrialized regions of the Northeast and Middle West are creditors of the South, Southwest, and Far West. These debtor-creditor relations change slowly over time, except for cases where there are marked changes in the relative importance of the States' retired population. Thus Florida, Iowa, Nebraska, and Wisconsin have tended to become creditor regions. In Florida this is due to the influx of older people who live off accumulated savings. In the farm States of the Midwest, it is due to the outmigration of younger people, leaving behind a higher proportion of retired people.

With the exception of Florida, the South is largely a debtor area. This area also contains a large number of rural poor. As we have explained earlier, much of the industrial growth of the Southeast was accomplished with capital borrowed from other regions. Without this capital, the industrial development of the South would have been far slower and the rural poverty problem far worse.

Public Policies Designed to Alleviate Rural Poverty

This section is devoted to the description and evaluation of various policy alternatives. The evaluation compares costs and contributions to gross national product (GNP). The gain from eliminating rural poverty is the net increase in gross national product over and above the costs of training and relocating individuals and businesses. The evaluation procedure therefore gives a contribution of zero to a policy which raises gross product by $1 in one region, and lowers it by $1 in another. It also counts as zero cost a policy which transfers $1 from one region to another but does not reduce gross national product. Other methods of evaluation may be substituted although they have the disadvantage of blurring the distinction between transfers and economic costs. For example, it might be desirable for some purposes to compare programed benefits with budgeted governmental outlays, in the typical cost-benefit fashion. The method used here has the advantage of telling immediately whether a particular policy improves the allocation of resources.[4]

It is well known that the rural poor population below the age of 65 contains a large number of children and adults who now look forward to a life-

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An application of this methodology may be found in Borts (*1*).

time of less than full employment, with low skills, poor education, and low wages. Due to lack of capital, imagination, good luck, and education, they have chosen not to follow thousands of other families who have migrated to urban areas. The potential economic gain from alleviating poverty consists of the difference between the lifetime earnings of the rural poor in their present environments, and the earnings they would enjoy if they could be brought into full participation in the economy. The social costs of producing this change consist in part of the costs of education and relocation of individuals and families. For this reason, it is apparent that education of the rural poor children will have a very high economic payoff. At present they receive less education than urban residents for at least two reasons: First, rural residents, being poorer, must leave school earlier to take up work and contribute to family support; secondly, because of lower incomes and a smaller tax base, rural areas provide lower quality educational facilities than urban. In addition, the social and cultural environment of rural areas places a low priority on education, particularly for Negroes. Public policy to provide additional education to children of the rural poor would have to break through the barriers just described. Some kind of adequate income maintenance program is needed to reduce the pressure on youngsters to leave school. Also, the financial resources of rural school districts must be augmented from State and Federal treasuries to provide adequate educational facilities. It should be noted that neither of these problems change when the rural poor migrate to the city. They may be easier to solve, however, in an urban environment. An urban environment provides a more articulated government structure for the supervision of family welfare programs and for the provision of remedial education to children coming from culturally deprived homes. In addition, an urban environment provides its own cultural and educational influences on children through the media of newspapers, television, radio, the movies, the rapid transit system, the downtown shopping areas, and the superhighways. Each of these provides contact with an aspect of modern society which is totally lacking in rural environments.

A second aspect of education for the poor concerns the training of young and mature adults. This is the same problem faced in urban areas under the category of manpower training and job corps training. We are dealing with a group of potentially educable men and women with anywhere from 5 to 50 years of working life ahead of them. Of course, the younger they are the higher the payoff to job retraining.[5] Nevertheless, job retraining should be made available to all who desire it, along with remedial work in academic school subjects, to the extent necessary to provide equipment for a useful working career in urban occupations.

Costs of relocating the rural poor depend on the distance they move and the length of time they need public welfare support. It is assumed that if capital, retraining, and relocation are offered to rural poor, a substantial proportion will accept. It must nevertheless be borne in mind that the willingness to migrate is influenced by the uncertainty of change, the fear of continued unemployment, and the fear of an unsatisfactory change in environment. The rural poor are very likely influenced by such factors in view of their inability or unwillingness to migrate on their own.

With these considerations in mind, let us examine the major types of proposals which have been put forward to deal with rural poverty. These fall under three headings: The relocation of industry to rural areas; the creation of growth centers; the stimulation through subsidy of continued migration of the rural poor along traditional routes to urban areas of the North, Middle West, and West.

Relocation of Industry to Rural Areas

The underutilization of rural manpower is in part a consequence of the geographic maldistribution of labor in rural areas. If by some happenstance, rural labor could be scooped up and placed in one central location, employees and industry would move in to take advantage of raw labor power available for hire. The problem of employing the rural labor force is therefore closely related to their geographic location. A second factor explaining underutilization is the poor quality of rural labor as an economic resource. The earning power of human beings is related to skills and motivations acquired through education and contact with the business world. Rural labor is of poor quality and is likely to be of low value to a potential employer without considerable investment in training. The wage which employers are likely to wish to offer rural labor may be very low and could be below federally determined minima. Considerable investment in labor quality will be needed to bring the productivity of such labor above the Federal minimum scale.

Despite the geographic maldistribution of labor, and despite its poor quality, one continually hears of plans to bring industry into rural areas. It is not surprising that this is a politically popular approach, due to the representative legislative system in State and Federal Government. The economic arguments for this policy are weak. Inducing industry into rural areas would produce a more dispersed geographic distribution of industry than exists at present or would occur even if the market for goods and services were perfectly competitive. This increased degree of dispersion is likely to be less efficient than alternative plans for reemploying the rural poor. The reasons are the relative costs of transporting men, materials, and finished goods to and from plants located in rural areas. For one thing, transport and communications facilities are poor among rural areas. Plant location away from centralized shipping terminals involves extra handlings and switching of cars, and results in increased freight costs. Location away from centralized air terminals imposes increased travel time and cost on plant managers. While social investment can improve these transport facilities, the increased utilization may not pay. The greater density of utilization in urban areas is likely to provide a higher social payoff to improvement in transportation and communications facilities. These remarks are made with the full awareness that social costs of land acquisition are higher in urban than rural areas. The conclusion is based on the extraordinary dispersion and magnitude of public investments and facilities which would follow a policy of bringing industry to rural areas.

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[5] An evaluation of the budgeted costs and benefits of job retraining programs is found in Muth (*13*).

There are, nevertheless, many instances when a plant voluntarily chooses a rural site, because of the proximity of some natural resource input or the availability of a concentrated rural labor supply. The location of chemical plants, pulp and paper mills, and textile mills in the South bears witness to the sensitivity of location decisions to raw materials and transport and labor cost. It is difficult, however, to justify a general policy of rural plant dispersion, based on particular examples of crucial cost elements. In addition, an industrial location policy based on dispersed rural populations is by definition restricted to some type of raw materials processing operation producing a transportable output. A much broader range of economic activities can be contemplated under alternative policies which allow for the formation and development of urban economic areas.

The foregoing remarks have concentrated on the economic costs and gains of a government policy directed toward the industrialization of rural areas. It has been assumed implicitly that in the absence of conscious policy, private firms would not choose such locations to the degree required to reemploy the rural poor. The reason for this has been made clear; namely, it is not privately profitable, given the present costs and returns as reflected in labor productivity, wage rates, and transport costs.

A number of writers have suggested that the private location choices by industrial firms are distorted by the failure of private costs to reflect the social costs of using labor, (See Borts and Stein, (*2, Ch. 9*). They argue that the social cost of using underemployed rural labor is zero, or at most a wage at which all rural labor would be reemployed. The explanation for the barrier between private and social wage costs is the presence of Federal minimum wage legislation. In the absence of such legislation the wage would presumably fall to a level which equated voluntary demand and supply of rural labor. It is, of course, possible that such a wage might be close to the poverty level. Nevertheless, there is an economic loss from rural unemployment. Wage subsidies have been suggested as a method to be used by State and local governments to offset the allocation effects of minimum wage legislation. The wage subsidy is a payment to the private employer which is variable with the number of individuals hired. It effectively lowers the private cost of hiring labor, and can be used to increase the number of people employed in a given locality. Financing of the wage subsidy can be accomplished either through State or Federal revenues. As explained in a recent article, the financing costs are a transfer and not a reduction of gross national product (*1*) The actual economic cost of the wage subsidy is the sacrificed productivity of capital goods when they are used in rural locations and not elsewhere.

A well-designed wage subsidy program which is limited to the reemployment of rural labor could be very useful to communities in attempting to attract new industry. It also has a very high payoff in terms of GNP created, because the marginal product of previously unemployed labor is a net contribution to GNP. The chief administrative drawback of the wage subsidy is its possible abuse as a competitive device by a large number of geographic areas. Under these circumstances it might have no lasting effect on the geographic distribution of industry, and might not result in the reemployment of idle rural labor. The program must therefore be designed and administered by a governmental unit which understands its functions, costs, and returns, and could use the policy with effectiveness. Even if a wage subsidy were successfully used, however, it might not eliminate all rural unemployment and certainly would not eliminate all rural poverty. The low quality of rural labor could be a stumbling block to employment at almost any wage.

Industrial and Residential Location in Growth Centers

The concept of the growth center has been discussed in the economic literature (*18*) and was recently defined in Federal legislation establishing the U.S. Economic Development Administration. The administrative purpose of defining a growth center is to permit Federal funds and programs to develop areas which are broader than, although related to, immediately distressed localities. Growth centers may be established in any part of the country so long as "its economic growth may reasonably be expected to contribute significantly to alleviation of distress in redevelopment areas (*23*). As applied to rural areas, a growth center would be a point at which population is brought together from a number of diverse places to provide a minimum viable urban size.

There is some disagreement in the literature, however, over the method of developing growth centers. In the report prepared at Iowa State University (*9*), it is suggested that development of rural areas proceed by identifying a large number of growth centers, each approximately a 1-hour drive from a surrounding rural population. Under this conception the growth center would be primarily a commuting focus, and only secondly a migration focus. My own feeling is that the growth center thus produced may be too small to provide a viable nucleus for further growth. In the discussion that follows, I shall treat the growth center as a migration focus. Under the act the maximum size of the growth center is 250,000 population, and this is the ultimate size I have in mind.

The growth center as a focus of development may have many economic advantages over the rural location of industry and its consequent dispersion.

(1) By centralizing the residences of workers, there is a reduction of commuting time between home and work place.

(2) To the extent that the growth center may be or become a rail and airport center, there is an economy in transport cost and transport time.

(3) Economic growth would not be restricted to mining and manufacturing. A large number of urban services would have to be expanded simultaneously. One would expect two or three jobs created for every job created in mining or manufacturing. In addition, the growth center could provide urban services to a surrounding farm population and consequently expand employment on the basis of its linkage with agriculture. There is no question, however, that this source of urban growth in rural areas has been in operation for some time and may not provide much growth potential.

(4) The larger pool of workers and skills available in a growth center would make possible some of the specialization of function which takes place in larger urban areas.

(5) The growth centers would provide a useful staging area for many migrants who will ultimately move to larger cities. To be attractive to the migrant, however, the growth center will have to offer better public service and housing than are available in larger, better established urban areas.

How large should a growth center be, and how many growth centers would be needed to transfer the rural unemployed? Probably the best strategy to follow in denoting growth centers is to choose existing small metropolitan areas as candidates for expansion, allowing them to reach 250,000 population. These should be located near rural poverty areas so that there will be personal and family connections between urban dwellers and the rural poor. The social capital in these areas will have to be expanded as workers are induced to settle in the growth centers. Nevertheless, this is still an improvement over the situation in rural areas where social capital is at a minimum. Establishment of a growth center requires the gradual and simultaneous transplantation of population and industry to specific urban areas. The inducements to families and individuals would take the form of relocation allowances, travel payments, and subsistence payments, between the period that workers began training and the period when they found employment. The training program does not receive explicit attention because it is an operative factor in any attempt to alleviate rural poverty. It therefore does not influence the evaluation of relative costs of alternative programs. All programs must include training.

It is not at all certain that additional inducements must be made to private business firms to locate in the growth centers. This would depend on the wage rates needed to clear the labor market and on the speed of adjustment needed to employ the flow of new workers. From the evidence previously examined on migration and economic growth, it is clear that firms will react promptly to the appearance of a trained labor force and will locate in areas where such labor is available in adequate quantity. Nevertheless, it may be felt desirable to speed up the attraction of firms into the growth center, to avoid a large fiscal burden of unemployment compensation benefits while waiting for the adjustment to take place. In addition, some subsidy may still be needed to overcome the discouraging effects of minimum wage legislation. It is doubtful, however, that minimum wages would be as important a deterrent to industrial location in the growth centers as to location in rural areas. The reason is that the greater economic benefit of location in the growth center will make firms willing to bear a higher wage.

Subsidized Migration to Presently Established Metropolitan Areas

The third alternative policy is really an acceleration and continuation of the historical patterns already observed. Under this alternative, which in fact is followed voluntarily by many members of the rural poor, government policy would induce the rural poor to migrate to metropolitan areas. Again the inducements would take the form of travel, relocation, and income payments. Presumably, the migrants would receive training at their destinations.

A number of observers of the rural migration pattern have objected to the continuation of this historical pattern for erroneous reasons. These reasons have been discussed by Borts (*1*); and the objections are discussed very briefly here. It has been argued, for example, that migration to urban areas is economically wasteful because (a) it leads to unemployment, (b) it increases urban congestion, (c) it bids up the prices of public service in urban areas, and (d) it imposes tax burdens on the present residents of urban areas. In an analysis of these issues, the following considerations are relevant:

(a) The rural poor certainly are not in desirable employments presently, if they are employed at all.

While there is no guarantee that they will find employment in their destination areas, there is a greater opportunity to do so. In addition, if national unemployment levels are satisfactorily low, the rural migrant has a better chance to find work where it is to be had. His chances, of course, improve with his acquisition of skill, with greater wage flexibility in the labor market, and with greater growth of employment opportunities. Thus the migrant is perfectly rational to move to the geographic area growing most rapidly.

(b) Congestion is not necessarily wasteful. Congestion represents the intensive utilization of certain economic resources. Congestion is wasteful depending upon whether the owners or users of such resources face the social costs of their actions. When drivers line up at a tunnel and wait 45 minutes to pass through the tunnel, they are imposing on the system delays which they themselves do not bear totally. In situations such as this, congestion is wasteful because the road space is inefficiently allocated. On the other hand, if a correct toll were to be charged for the use of the tunnel, congestion would not disappear entirely. There is always an optimal amount of congestion which reflects the tradeoff between the value of the delay in the use of a facility and the social cost of constructing extra amounts of that facility. For this reason, congestion as an economic variable has an optimum level in each situation, and there is no implication that moving people to congested areas is necessarily wasteful. Nor is there any implication that larger cities are more congested than smaller. Congestion can only be measured in terms of some rate of utilization, as a percentage of social capital, and it is conceivable that the congestion in smaller areas might be as great as in larger.

(c) Similar arguments can apply to the price of public services in urban areas. If the price of public services (e.g., the wages of school teachers) are bid up by the movement of population into congested areas this simply reflects the local immobility of resources. It is not a social cost. Bidding up the price of a scarce resource is the way in which the market rations it among different users. There is nothing to prevent more school teachers from moving to a congested area in response to the higher price, and they are likely to do so.

(d) Finally, the issue of tax burden has been incorrectly described in the previous statement. It is not at all clear that in the long run the present resident of an area subsidizes the migrant. The migrant settles down and becomes a taxpayer. While it is true that the present facilities are provided to him without a tax contribution, in the long run he and his children make a substantial tax contribution to the education and provision of public service for new migrants. For all these reasons, therefore, I think it is erroneous to argue on economic grounds that it is wasteful for individuals to migrate from rural areas to large cities. The economic evidence is clearly in the other direction. The evidence on wages and land rents indicates that resources are utilized more intensively and provide higher incomes in larger cities. There are strong economic grounds for continuing the migratory patterns which have been established.

Choice Among Policies

If one were to choose among the three policy alternatives, therefore, it is best to exclude the first, and try to make a rational distinction between the second and the third. The second policy is at a disadvantage because it is purely hypothetical, and it cannot be demonstrated firmly that economic resources are more useful in growth centers than in large existing urban areas. There are, nevertheless, three grounds for arguing that growth centers are desirable relative to the third alternative: First, the growth center will be near or in the center of a large rural population. The willingness to migrate, as noted, declines with the distance to the destination area. Rural inhabitants will have less objection to moving to a growth center. If they own small plots of land they may even choose to retain possession and farm them on a casual basis. Thus the cost of inducing migration will be less when the movement is to a growth center. There is no doubt that once a movement has been made, the more adventurous eventually will leave the growth centers for larger urban areas. This does not detract from, but rather increases, the usefulness of the growth center.

A second argument for the growth center is related to the cultural changes needed to fit individuals for an urban, mechanized society. A growth center will be inhabited by a culturally homogeneous group, former rural residents, with stable and uniform values. Whatever social maladjustments are produced by large-scale migration from rural to urban life would seem to be minimized through the use of the growth center as a staging area for cultural change. These remarks have even greater impact when one considers the racial conflicts which have been generated by the migration of rural whites and Negroes into urban areas. Whatever social and personal disorganization accompanies family migration is magnified by the racial conflicts among migrants and between migrants and older residents. In a growth center there would have to be social acceptance of the fact that a new area was being built, with certain unknown percentages of the migrants representing different races. In addition, the growth center would have to provide a quality of public service and law enforcement superior to that found both in southern and northern communities. Otherwise, it will not divert the present migratory flow. The growth centers would in fact contain a racial mixture of rural migrants which reflected voluntary choices to respond to the incentives provided by government. No one can guarantee that growth centers will have better race relations than northern cities. Clearly, they will have to offer superior public services and environment in order to attract the migrant who would otherwise go north.

It may be objected that social disorganization will be greater in a growth center because of the absence of any permanent group of residents with well-established social values. From this point of view, the social structure of growth centers might come to resemble the newer cities of southern California. Certainly if one could make such a case stick, it would be a crushing indictment of this form of social and economic organization. I personally doubt that the case is valid. Most of the rural poor who would form the migrant group to growth centers would share the cultural and religious life of the original residents. They are less likely to be disturbed in geographic areas close to their rural origins, where they move in a large enough group to retain cultural homogeneity.

A third argument for the growth center is unpalatable to most observers, but one that must be recognized. The continued migration of large numbers of rural poor to northern and western cities has imposed a change in the quality of city life. Many older residents of these cities have fled to the suburbs in part to avoid living next to people whom they dislike. Many older residents of cities would gladly subsidize the migration of the rural poor elsewhere, and would gladly pay to have cities established elsewhere where the rural poor could learn the ways of urban life. The growth center would provide a vehicle for the expression of these views. If the economic future of the rural poor can be bettered by establishment of growth centers, and if this makes the older residents of the established cities happier, then it is clearly a policy worth exploring and a concept that could be developed. It must be emphasized that if the growth center is to become a reality, then it must promise a better life to the rural poor than the future which faces them in the northern and western city. Otherwise, the growth centers will be bypassed in the flow of migration.

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Chapter 10

Appendix: Rural Poverty in Puerto Rico

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Poverty in Puerto Rico is more widespread and more severe than in the United States. Puerto Rico is still largely an agricultural society threatened with a population explosion. Many of the rural poor in Puerto Rico exist under conditions similar to those in the poorest nations of the world. Despite considerable economic growth during the past couple of decades, many in Puerto Rico are still deep in poverty. And despite marked success in controlling population growth, Puerto Rico still suffers from the pressures of growing numbers of people on limited resources. Were it not for the "safety valve" of migration to the United States, Puerto Rico would, indeed, face almost insurmountable problems. Yet, with all its obstacles, Puerto Rico has accomplished remarkable progress toward overcoming its poverty problems.

The magnitude of rural poverty in Puerto Rico is extreme—certainly by any standards employed in the United States. Rural Puerto Rican median family income in 1959 was only $839, less than half the income level for urban Puerto Rico and only about 15 percent of the average for the United States (*9*).[1] The disadvantaged position of rural families is reflected further by the fact that only 20 percent of urban families in Puerto Rico reported incomes of less than $700 in 1959, compared to 44 percent of the rural families. For the 17,000 rural families whose head worked less than 14 weeks in 1959—10 percent of those who worked—median family income was only $401. For the more than a fourth of all rural family heads who did not work in 1959, total family income averaged a mere $422.

Rural poverty on the Island is far more extensive than rural poverty in the Appalachian States, when the same income categories are compared (table 1). The Appalachian States having the most severe rural poverty—Kentucky, Tennessee, and West Virginia—had between half and two-thirds of the rural families with incomes below $3,000 in 1959; in that year, over 90 percent of rural Puerto Rican families had incomes below $3,000.

However, if a poverty threshold of $2,000 per family is used for Puerto Rico, nearly 90 percent of Puerto Rico's rural families were in poverty in 1953, and over half (56.6 percent) were in poverty in 1963 (*6*).[2] In these terms, the reduction in rural poverty is remarkable. But by 1963 the proportion of rural Puerto Rican families with less than $2,000 income was approximately the same as the proportion in the three Appalachian States with less than $3,000 in 1959.

Economic Development

The economic environment of Puerto Rico in 1940 was far from promising (*1*, *2*). Poverty was almost total. Unemployment, underemployment, extremely

TABLE 1.—*Percent of rural families with income below $2,000 and $3,000 in selected years in Puerto Rico, Kentucky, Tennessee, and West Virginia*

Income	Puerto Rico 1953	Puerto Rico 1959	Puerto Rico 1963	Kentucky 1959	Tennessee 1959	West Virginia 1959
Below $2,000	88.4	81.8	56.6	42.6	49.7	37.0
Below $3,000	95.0[1]	91.1	79.4[1]	58.6	64.3	52.5

[1] The Puerto Rican Planning Board used the interval of $2,000-$4,999 in their presentation of income distribution data for Puerto Rico for 1953 and 1963; the percent of rural Puerto Rican families below $3,000 in these years was estimated by use of the proportion of the families with incomes of $2,000-$4,999 within the $2,000-$2,999 interval in 1959.

Note: This paper was written to point out some features of rural poverty in Puerto Rico and to express the relevance of the major recommendations of the Commission to Puerto Rican problems.

[1] Italic numbers in parentheses indicate references listed at the end of this paper.

[2] The $2,000 threshold is more meaningful as a policy goal for Puerto Rico than $3,000. At the $3,000 threshold, about 80 percent of their rural people were in poverty in 1963, as compared with about 25 percent in the United States.

low levels of living, and congested living conditions were evident everywhere. Per capita income was only about $120. An average of 546 persons per square mile of the small Island was higher than such crowded places in India with 374 and Italy with 443 persons per square mile. High birth rates and low death rates threatened a devastating population explosion. The economy simply could not absorb the increasing numbers of people. Almost one out of five men could not find jobs. The relatively high congestion is reflected by the fact that more than five persons on the average lived in a dwelling unit. Life expectancy at birth was only 46 years, mainly as a result of high infant mortality. Labor productivity was low, and personal incomes in 1940 averaged only about a fifth of the U.S. average incomes.

In 1940 three industries—sugar and its byproducts, needlework, and tobacco—constituted an unstable and unpromising base for economic growth. Employment in sugar and tobacco industries was highly seasonal and dependent on the weather. Dependent on low wage rates, the needlework industry provided little prospect for economic growth.

During the World War II years, however, economic growth and prosperity began to permeate the tiny Island. Remittance of Federal excise taxes on rum sales yielded an estimated $160 million to Puerto Rico. Rum sales soared during the war years and sugar and tobacco exports to the mainland increased. For the decade of the 1940's exports doubled and imports tripled, employment and incomes increased along with increased production.

The $160 million rum bonanza of the war years was invested in nine public corporations engaged in electric power, irrigation, water supply, sewage disposal, public housing, the San Juan bus system, ports and airports, and a limited telephone and telegraph system. By 1959 assets of these corporations had reached over $850 million.

Planning in the early days of the 1940's stressed the development of agriculture since the Island was so dependent on this sector. But by the end of the 1940's, it became clear that other sectors must be developed if employment opportunities were to be available to the growing labor force.

The net result of all the changes and improvements in Puerto Rico during the past couple of decades is both promising and discouraging. Average family incomes nearly doubled from 1953 to 1963 (6). Income of urban families increased from $2,218 to $4,325, and income of rural families from $1,226 to $2,278. Rural family income levels therefore lag behind those in urban areas by about a decade, or, put differently, average only about half as much as in urban areas. In 1963, per capita income in rural areas was only $400.

The extremely low income level in rural Puerto Rico and the magnitude of the income gap between rural and urban families indicate that the rural populace is not sharing fully in the Island's progress. Rural poverty in Puerto Rico is related to many of the same kinds of things as in the United States—low levels of education, lack of work skills, low wages in agriculture, insufficient growth of job opportunities in rural areas, and many other factors.

Substantial advances in the agricultural sector are not likely to occur—at least of the kind and degree to contribute much toward solving rural poverty in Puerto Rico. About half of the population is still classed as rural. The state of technology in farming has advanced little because of limited acreage on the Island adaptable to mechanization and the limited potential for mechanizing production in such crops as tobacco, coffee, and bananas. Productivity of agricultural workers therefore remains low, and wages for farmworkers reflect this low productivity. The seasonal nature of farmwork further aggravates low wage rates as many farmworkers are unemployed for relatively long periods.

Puerto Rico's Population

Poverty problems in Puerto Rico are aggravated by a rapid growth of population on a small, limited area of land. The rate of population increase declined during the 1940's and 1950's, partly because of net migration losses and partly because of a declining birth rate, but the pressure of people on resources is still considerable. The population of Puerto Rico increased by more than 340,000, or 18 percent, during the 1940's, and by another 139,000, or 6 percent, during the 1950's. The declining growth rate for this 20-year period has reversed itself since 1960. From 1960 to 1964, Puerto Rico's population increased to nearly 2,600,000, an increase of 235,000 or 10 percent, since 1960 *(8)*. As a consequence, the number of persons per square mile has increased from 687 in 1960 to about 750.

The mounting pressure of population is relieved some by migration. Between 1948 and 1965 more than a half million reduction occurred in Puerto Rico's potential population growth as a result of net migration. Had there been no migration during this period, the population would have climbed to the 3 million mark. There is considerable movement to and from Puerto Rico, as evidenced in 1965, for example, when an estimated 66,000 persons left the Island, but the net migration loss was only about 11,000. As of 1960, more than two-thirds of all Puerto Ricans in the United States had been born in Puerto Rico. This amounts to about one out of five among all Puerto Ricans (those in Puerto Rico and the United States combined) who were Puerto Rican born but living in the United States *(7)*.

More Puerto Ricans reside in the metropolitan area of New York than in the city of San Juan. Altogether, about 1.5 million Puerto Ricans reside on the mainland, or nearly 60 percent as many as reside on the Island. Also, many Puerto Ricans come to the mainland for seasonal farmwork without changing their residence on the Island.

A recent study of poverty-stricken Puerto Ricans in urban areas of San Juan and New York by Lewis reveals that (1) 83 percent of the adults in the San Juan sample were migrants from rural areas of Puerto Rico; (2) 82 percent of the families in the New York sample were migrants from a Puerto Rican slum area—mostly from San Juan—and the remaining 18 percent came directly from rural Puerto Rico (12 percent) or from urban nonslum zones of Puerto Rico (6 percent); and (3) two-thirds of the family heads in the New York sample were migrants from Puerto Rican slums who also were former rural Puerto Ricans (5).

Offsetting the high birth rates in rural Puerto Rico and redistributing people to urban centers is the continual movement not only to the mainland but to the cities on the Island. From 1940 to 1967 the rural population dropped from about two-thirds to half of the total Island population. The number of rural residents, however, remained stable at about 1.3 million, as the urban population more than doubled.

Rural-urban migration in Puerto Rico follows much the same pattern as in other countries undergoing modernization. Young men leave rural areas in search of employment, either in the urban centers, particularly San Juan, or on the mainland, especially New York City. Women are more inclined to seek jobs in newly established manufacturing plants or as domestics in urban centers.

Declining birth rates also have helped ease the problems accompanying Puerto Rico's population growth. The numbers of births per thousand population—the crude birth rate—fell from 42 in 1945 to 30 in 1965. Death rates fell even faster during this period, from about 14 per thousand population in 1945 to less than 7 by 1965. The rate of natural increase in Puerto Rico's population therefore dropped from 28 to about 24 per thousand, a growth rate that can still rather quickly outstrip the Island's ability to provide employment, housing, and all the things additional people would need.

Women in rural areas of Puerto Rico, like rural women most everywhere, bear more children than those in urban areas. In 1960 there were 5,437 children ever born per thousand ever married rural women 15 years of age and over, compared to only 3,800 for women in urban areas. Given the lower incomes and lack of opportunities for education, employment, and housing, the higher numbers of births and children constitute a severe economic handicap to rural families.

The migration of young adults from rural areas of Puerto Rico has changed the age structure of the remaining rural population much as has happened in rural areas of the mainland. A preponderance of children and older people are left behind. Half of the rural population in 1965 was under 15 or 65 years of age and older. During the 1950's there was a reduction of about 50,000 persons between 20 and 39 years of age in rural areas. Hence, there is a relatively large number of people in the dependent ages.

Education

Nearly a fourth of the male employees in agriculture in 1965 had never gone to school, and about half of these employees had completed less than 4 years of schooling. On the other hand, less than 4 percent of the employees in the manufacturing and service sectors of Puerto Rico had no schooling, and less than 15 percent of these employees had completed less than 4 years. Only 1 percent of those working in agriculture had schooling beyond the 12th grade, as compared with 18 percent in the service industries. However, Puerto Rico is making much progress in education. In 1900, only 1 percent of the population went to school, and in 1940 only 50 percent attended. Only recently has universal education in the first grade been achieved. About 85 percent of Puerto Rico's youth between the ages of 6 and 18 now are attending school.

Progress in educating rural youth is increasing, but their educational opportunities still lag behind those of urban youth. A median of 3.6 years of schooling was completed by rural persons 25 years of age or over in 1960. In urbanized areas, this median was 7.2 years, and 4.2 for Puerto Rico (9). About 45 percent of those attending school in rural areas are on half-day basis because of the limited school facilities. The double enrollment (half the students attending school in the mornings and half attending the same school in the afternoons) is down to the 45 percent level from about 90 percent of those enrolled in 1956. On the other hand, about 12 percent of the urban school children are involved in half-day sessions.

An estimated 40 percent of the rural children still drop out of school before completing the sixth grade. Many of these surely will experience a life of poverty, because a high school education or more will be required for effective participation in the labor market in the future, either in Puerto Rico or the United States. The dropout rates are decreasing rapidly with the rapid progress being made in providing needed facilities, educational materials, and teachers for educating the rural youth.

Public Welfare

As of June 1966, about 14 percent of the families in Puerto Rico received benefits from public assistance programs, and two-thirds of these were rural families. In addition, about 2 percent of the families received child welfare services. Welfare payments to families in Puerto Rico rarely exceed $35 to $40 per month (5). Of the 174,497 rural recipients of public assistance and welfare services, 36,993 (21.2 percent) were adults either aged (21,463), blind

(1,047) or permanently and totally disabled (14,309). About 40 percent of the recipients had not completed any schooling and only about 13 percent had advanced beyond elementary school. Nearly 28 percent of the adults on public welfare were in the labor force, and more than two-thirds of these were actually employed.

Rural Labor Force and Employment

Part of Puerto Rico's poverty problem is attributable to relatively low labor force participation accompanied by high unemployment rates. About 320,000 individuals 14 years of age and over were in the rural labor force of Puerto Rico in 1966, and about 50,000 of these were unemployed. Another half million rural Puerto Ricans 14 years of age and over were not in the labor force. These were women staying at home to take care of their families, young people in schools, people incapacitated, and those not working and not actively seeking employment. The last group is composed primarily of rural teenagers who had dropped out of school. Rural women in Puerto Rico do not participate in the work force and add to family incomes at the rates that urban women do, partly because of limited job opportunities in rural areas, but, more importantly, because of both lack of skills for labor force participation and traditional values in support of nonparticipation. Agricultural employment is declining, and employment of rural people in manufacturing construction and service sectors is increasing. In 1966, 57 percent of the male members of the labor force of the Island were rural residents. About two-thirds of the males employed in the construction industry were living in rural areas. The proportion of rural males employed in other nonfarm sectors ranged from about 30 to 50 percent. About half of the Island's female employment in manufacturing, and about 41 percent of total female employment in all industries, were rural people.

The relatively low educational and skill levels of people in the rural labor force presents an especially difficult problem in human resource development commensurate with the growing skill level requirements for nonfarm employment. This also is a major obstacle to industrializing the rural areas. Many of the rural members of the labor force are past the prime work ages, and a high proportion of these are untrainable for skilled jobs.

Government Services to Rural People

The government of the Commonwealth of Puerto Rico has made concerted efforts to upgrade living conditions, working conditions, job opportunities, and education and training of their rural people during the past two decades.

Operation Bootstrap

The now famous "Operation Bootstrap" was designed to encourage private investment, both local and foreign, in order to step up the Island's industrial development (*1, 2, 3*). Two years after the initiation of Bootstrap, the Economic Development Administration (EDA), known as "Fomento," was created in 1950. EDA took on the functions of the Puerto Rican Industrial Development Company (PRIDCO), formed in 1942 to promote industry and reduce unemployment. EDA has been instrumental in channeling government resources toward encouraging private investment, promoting tourism, and stimulating rum sales to the mainland. Since 1950 some 1,500 manufacturing plants have been established with help from EDA. About a tenth of the Puerto Rican labor force is employed in these plants.

By 1954 difficulties in Puerto Rico's industrial development program were evident. The business recession in the United States coincided with the cessation of hostilities in Korea and a slowing down of emigration to the States. The sensitivity of businesses in Puerto Rico to downturns on the mainland made for uncertainty of employment. Low wage apparel and footwear industries opened and closed plants to meet expansion and contraction in demand. Obstacles to economic growth also resulted from the fact that many new plants were so closely tied to the U.S. economy that they had little impact in Puerto Rico, a condition that still prevails.

Recent industrial development efforts have concentrated on encouraging local business interests and expanding the Island's tourist industry. Tourists to Puerto Rico spent an estimated $140 million in 1966 compared to only $25 million a decade earlier.

Despite the many problems of economic development in Puerto Rico, marked advances have been recorded. Income generated by manufacturing has increased 12.5 percent a year since 1940 and now accounts for a fourth of the Island's income. Income from trade, government, and other sources has increased at a rapid pace also, while income from agriculture represents a smaller and smaller proportion of total income in Puerto Rico. The labor force has increased by over 170,000 since 1940, but about 1 out of 10 workers are still unemployed.

Emphasis on the processing industries in the 1940's gave way to the development of labor-intensive industries during the 1950's, and in the 1960's heavy industry is expanding. The five government owned and operated plants in the 1940's used local natural resources, while other plants processed agricultural products. The new industries of the 1950's depended on the U.S. mainland for raw materials and shipped most of the output back to the States. By the 1960's, Puerto Rico was shifting to heavy industry, capital-intensive methods of production, and to consumer durable and producer goods.

Community Programs

Puerto Rico's progress in education of their rural youth was noted earlier. Another kind of educational program—community education—is unique in relating adult education to individual and community action. Individual fieldworkers work intensively with a limited number of families and communities in teaching people the processes of problem-solving through democratic procedures. Although Federal funds (OEO) now constitute about half of the budget for this program, it was created by the Government of Puerto Rico in 1949, and it has contributed immensely to community action to solve community problems in rural Puerto Rico.

The OEO community action program in Puerto Rico adds Headstart and a number of needed social, medical, and dental services to the community education program. As is the case in the United States, however, the lion's share of the OEO community action program funds are used in urban areas. About a third of the funds for Puerto Rico are being used to help rural communities.

A unique kind of community action program is the one directed toward improvement of isolated communities. These rural communities in extremely isolated locations have lagged far behind cities and even other rural communities in Puerto Rico in social and economic progress. In addition to intensive efforts in community education and action, the program functions to bring all government services to the communities that can contribute to improving living conditions and to eliminating the state of physical and social isolation.

Living conditions in rural Puerto Rico have been greatly improved in the past two decades through the self-help housing program, rural electrification, telephone service, extension of water aqueducts, and road construction. Housing conditions still are unsatisfactory in rural areas, with the major problem being crowding of people in too little space. Two-thirds of the rural households had electricity in 1960, and all requests for it now have been filled. About two-thirds of the rural families now have piped running water in their homes, or just outside their homes. A good start has been made in installation of public telephones in rural areas. Much remains to be done to complete the projected system of rural roads.

Farm Jobs and Placement Services

Puerto Rican farmworkers are assisted in their search for employment by the Farm Placement Program of the Puerto Rico Bureau of Employment Security. The two major phases of this program are designed to provide placement services to local workers and employers and to refer workers to mainland growers under contract.

As a reaction to abuses many farmworkers suffered on the mainland, Puerto Rico enacted legislation beginning in 1947 to assure protection for these workers. Standards for selection and contracting of workers were established. Fees to workers can no longer be charged. Puerto Rican workers are now given employment preference over foreign workers by the United States Bureau of Employment Security in areas where the local farm labor supply is insufficient. Clearance orders certify the wages, and working and living conditions in areas where workers are to be employed. Since 1951 the Puerto Rico Employment Service, affiliated with the U.S. Employment Service, has administered the registration, selection, orientation, and contracting of workers for farmwork on the mainland. In 1954 the Employment Service became part of the Puerto Rico Bureau of Employment Security.

Under the present system, before an order to Puerto Rico for farmworkers is served the employer must sign a contract with workers approved by the Secretary of Labor of Puerto Rico. The contract guarantees a minimum length of employment, payment of either salaries approved by the Secretary or prevailing salaries, a minimum of 160 hours of work every 4 weeks, workmen's compensation coverage, adequate housing, and a minimum charge for meals. In addition, the employer must provide air-light and nonoccupational insurance coverage and post a performance bond with the Secretary of Labor of Puerto Rico. Housing facilities provided by employers on the mainland are inspected by the Migration Division of the Puerto Rico Department of Labor, which maintains field offices on the mainland for this purpose.

Referrals of agricultural workers to the mainland increased from almost 5,000 in 1948 to over 20,000 by fiscal year 1967.

In contrast to referrals to jobs in the States, only 10,000 workers were placed in fiscal year 1967 under the local farm placement program. This program provides for registration and recruitment of workers, movement of workers from one area to another, coordination of efforts with local agricultural agencies, and the establishment of consulting committees during the sugarcane and coffee seasons.

Manpower Development and Training Programs

The Vocational Education Division of the Department of Education, in coordination with the Bureau of Employment Security, administers the manpower development and training program initiated in 1962. Trainees are screened, selected, reimbursed during training, and placed in jobs upon completion of the training program whenever possible. As of March 1967, more than 11,000 persons were enrolled in over 100 different occupations. About a third of these were in essentially rural types of jobs. Success of the program is reflected by the fact that 83 percent of the trainees stay with the program, and 84 percent of those completing courses have been placed.

Collective Bargaining and Unemployment Insurance for Agricultural Workers

Agricultural workers in Puerto Rico are neither specifically included nor excluded from the provisions of the Puerto Rico Labor Relations Act of 1945. Under this law the Puerto Rico Labor Relations Board has the responsibility for promoting the principles of collective bargaining and establishing the rights of workers to strike and to organize.

As a result of the instability of employment in the sugar industry, workers have been protected by unemployment insurance since 1948 during the periods following the cutting and grinding of each sugarcane crop. Workers may now receive benefits of $7 to $20 per week for a maximum of 12 weeks during any benefit period. About 60,000 eligible claims have been filed annually during recent years. In a 1964 modification of the unemployment insurance program, benefit payments to sugarcane workers displaced as a result of technological changes may be extended to a maximum of 52 weeks, in addition to the 12 weeks of regular benefits.

Applicability of Commission Recommendations

The government of Puerto Rico has had rural poverty programs in operation for at least two decades. The success of these programs has been hindered mainly by the limited resources for funding them. For example, the public service employment program for seasonal farmworkers fills only about a third of their employment needs. The job corps program, initiated in Puerto Rico well before the OEO Act of 1964, is meager in relation to the needs. However, the nucleus of poverty programs, coupled with experience in their operation, provides a solid foundation for the future.

In its report to the President, *The People Left Behind*, the National Advisory Commisson on Rural Poverty did not develop recommendations in relation to the unique problems and experiences of Puerto Rico. Many of the recommendations made by the Commission, if implemented, will be of assistance to rural people of Puerto Rico. In particular, recommendations on the public assistance programs, rural housing, public service employment, manpower development and employment services, health, family planning, and regional development should add to the efforts of Puerto Ricans in reducing their rural poverty. The major need in these areas is more resources for financing the on-going programs of the Commonwealth. Legislation to implement the recommendations should permit major responsibility of the Puerto Rican government in devising administrative procedures and operating the programs.

Recommendations on minimum wages, community development, natural resources, and agriculture, forestry, fishery and mining industries either are inappropriate, or have little or no relevance to Puerto Rico's problems. The Puerto Rican government has established a minimum wage structure reasonably consistent with the productivity of their labor force in various activities and with the stage of their economic development. Puerto Rico does not experience the kinds of problems underlying the Commission's major recomendations on community development, natural resources, agriculture, forestry, fisheries and mining. For example, Puerto Rico has a scarcity of farmland, not a surplus. Forestry and mining are not actually or potentially significant industries on the Island. The community development programs in operation in Puerto Rico are coordinated and integrated efforts of various agencies of government.

The magnitude and uniqueness of the problems of rural poverty in Puerto Rico place a burden on the Commonwealth to finance and operate programs of their own, and suggest the need for leadership by the government of Puerto Rico in administering the use of Federal funds.

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PART II

Mobility and Migration

Chapter 11

Education and the Occupational Achievement Process

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Introduction

People from several disciplines have been involved in the search for a simple yet valid explanation for variations in educational and occupational achievement. Perhaps most numerous among these are psychologists and sociologists. Vocational psychologists have brought to the problem their knowledge of the psychological causes of individual differences in behavior (*3, pp. 395–410*).[1] Other psychologists have brought hypotheses concerning the motives impelling achievement (*23, esp. pp. 36–62*). Sociologists have brought a knowledge of social environmental influences on behavior, as well as their conception of choice behavior as the selection of a limited number of alternatives from among the variety presented to the person by the social system in which he participates (*5, p. 10; 17, pp. 7–17*). Yet we have not achieved complete agreement. In part this may be due to isolation among disciplines. But the larger part is doubtless due to the practical difficulties involved in testing the key hypotheses proposed by the various theories. Only recently have techniques become available which permit behavioral researchers to analyze simultaneously the chains of influence among several variables (*2, 9, 43*). And even the best of such research (*10*) is handicapped by the lack of systematic and comparable data taken on appropriate variables over the whole course of occupational and educational selection processes. Researchers are often ingenious and sometimes brilliant in their attempts to overcome the limitations imposed by small, areally-restricted samples, by inadequate longitudinal assessment of changes of the process of educational and occupational development, by a less-than-ideal selection of variables, and by the practical difficulties in conducting scientific experiments on the subject. Nevertheless, if we examine the best of our research from the point of view of what *ought* to be done, we must conclude that there are still many gaps in our knowledge of the educational and occupational achievement process. What one writer (*28*) has said while reviewing the recent outstanding work of Coleman and others (*6*) on the effects of education on minority group performance might be said of practically all of the best work in this area: ". . . this is not a good study . . .; it is just the best ever done."

The main objective of this paper is to summarize present research and theory about the process of occupational attainments. In addition we shall indicate some of the main lines along which new research should be conducted, and shall draw implications regarding ways to change levels of educational and occupational achievement. Some of the information presented is indisputable, being based upon census data. But the data are less defensible when we come to specifying the causal system that accounts for such facts. Unfortunately these aspects are both more interesting to the social scientist and more important to the layman. This is because when we identify the variables in determining a system of repetitive behavior, such as the occupational achievement process, we also know at which points we can intervene in the system in order to change the behavior. As we shall see, in contemporary America the central and best understood element in the occupational achievement process is the educational achievement process. For this reason, much attention will be concentrated on the latter in this paper. Moreover, during recent years, rapid gains tending toward equalization of educational achievement have been made. This is especially true outside the rural South and among the white population, both rural and urban. The paper attempts to document the major inequalities, and to show the connection between educational and occupational achievement.

Prospects for Occupations and Education

Achievement and the Occupational Prestige Hierarchy

The occupational structure and its changes are the starting point for social psychological explanations of the occupational achievement process, specifically the prestige structure of occupations. Most of the time when sociologists refer to occupational achievement, they mean achievement along the prestige dimension of the occupational structure. This dimension is not identical to money income. Research on the social standing or prestige of occupations has shown that variations in what the population believes to be the quality of occupations is far from perfectly correlated with income, though the correlation is positive, as one would expect (*29, p. 124; 25*, table *VI–8, p. 150*). It is presumed that income is only one of the rewards provided by an occupation, and that prestige includes the net balance of this and other rewards. This is not difficult to understand. Some prestigious occupations, such as priest or minister, are commonly believed to bring great intrinsic rewards much more important than money; indeed, money income is often viewed as a necessary evil for such people. Or on the other hand, some necessary occupations are viewed as so degrading as to require unusual compensation in order to attract personnel. Others, not degrading, have drawbacks such as involving risk and therefore require extra compensation.

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

Behind the emphasis on prestige as the main dimension of occupations there lies the assumption that the importance of occupations in the social system as a whole is what the population defines it to be. It is because of this fact that the sociologist ordinarily defines occupational achievement differences among persons in terms of the prestige of the occupations they hold.

What do we know about occupational prestige hierarchies? The most important fact is that the occupational prestige hierarchy of contemporary urban societies is remarkably stable from time to time and from place to place. The prestige of various occupations has been assessed in a number of research projects in the United States. Most of the more important of these have been summarized by Hodge, Treiman, and Rossi (*21*). Ordinarily in these projects, each member of a sample of the population is asked to rate each of a sample of occupational titles on a short scale of "social standing" or some similar term. In the most comprehensive of these, reported by Hodge, et al., two large and representative samples of the adult population were asked to rate each of 90 occupational titles on a five-point scale, to which scores were assigned (*21*). Data were collected in the mid-1940's and early 1960's. A score standing for the overall social evaluation of each occupation was calculated by averaging the ratings it received from each sample member. This was done for each occupational title at both times. The correlation between the two sets of average scores was then calculated. (The base frequency here is equal to the total number of comparable occupational titles rated in each time period.) As thus determined, the correlation between the two sets of occupational prestige scores is r = +.99. This indicates almost no change in the occupational prestige hierarchy over a period of about a quarter of a century. All other studies of occupational prestige are technically less adequate than these but they show similar results.

The remarkable durability of the contemporary urban occupational prestige hierarchies is further attested by the high intersocietal correlations among them. On the whole, the methods are comparable to those outlined in the preceding paragraph. There are technical and theoretical problems in such intersocietal research which are not encountered in intrasocietal projects (*16*). These lead one to discount to a degree the similarity between the prestige hierarchies of different societies. Nonetheless, the evidence is clear that in all urban societies studied to date—capitalist and communist, developed and underdeveloped—the correlations among occupational prestige hierarchies are very high, usually above r = +.85 (*21*).

In summary, sociologists measure occupational achievement in terms of the person's level in the occupational prestige hierarchy. They do this because they believe that prestige appropriately summarizes all of the gains an average person receives from any occupation. Their confidence in the occupational prestige hierarchy is supported by the evidence of its stability over time and its repeated reappearance in various societies.

Changes in the Occupational Structure

This is not to say that the occupational structure is fixed; indeed it is changing in several ways. The fundamental transformations are occurring in efficiency of production and regularization of decision-making. Changes in the occupational structure may be considered as consequences of our increasing capacity to produce and our growing ability to organize decision-making processes.

Fundamental transformations in production and decision-making

For generations a marked and sustained increase in the efficiency of work has been occurring. This has been manifested in at least two main ways. One is the continuing "automatization" of material production processes, to coin a word. The other is the continuing "regularization" of the human processes of decision-making, to coin another. In their respective spheres, the two are exact parallels of each other.

By automatization we mean the ever-more automatic transformation of raw or "primary" materials into usable form. The concept includes the mechanical aspects of the industrial revolution as well as the mechanical and electronic aspects of the recent techniques of automation, and in addition, any future breakthroughs in machine methods of production. Clearly, this process of constantly increased efficiency in technology exerts a continuing effect on the whole occupational structure. It exerts its effects on the sheer numbers of man-hours required to produce any given artifact; it generates new skill requirements, and makes others obsolete. On the whole, automatization has served to reduce the human work involved in production, indicated by the well-known increase in gross national product (GNP) per capita, and by a remarkable shortening of the workweek (*7, 14*). Because it has increased food production and distribution and made efficient medical and sanitation systems possible, it has also permitted enormous increases in population. We shall return to this point later.

By regularization of decision-making we mean the systematization of means for obtaining and assessing information with which to determine group goals and to select means for achieving them. Regularization applies to decisions concerning material production and decisions of any one group about its behavior toward others. As the sociologist views it, regularization reduces—ultimately almost to zero—the effect of personal idiosyncracies on decision-making processes. It does so by increasing the number of persons involved in any one decision, by reducing the span of control of any one person, and by increasing the amount of knowledge, "expertise," contributed to any single facet of a decision. That is, it is efficient to draw upon the talents of a number of people in coming to conclusions which will have important consequences for many. It may be that in the long run regularization might also release human effort, but at this point in history it seems to be absorbing more and more people who are increasingly highly trained—administrators and financial officers, for example.

Paradoxically, while automatic production releases human effort it also permits an expansion in population, yielding larger numbers of groups each of which must relate to each other. So the process of automatization increases the demand for regularized decision-making. This may well lie behind much of the growth of large government and large business. At the same time it should not be forgotten that the great increases in efficiency brought on by the two processes of automatization and regularization make it realistic to consider solving social problems or engaging in explorations we would not have dreamed of under earlier conditions: "the poor have always been with us" but only during this decade have we decided to try to erase poverty; and the moon too has always been with us, but only recently did we begin trying to visit it.

For the occupational structure the overall recent results of these processes are quite clear. Agricultural production has more than doubled since the end of World War II. Between 1947 and 1961 output per worker rose by more than 50 percent. Taking a longer view, gross national product per capita has increased about threefold since 1900 (*3, p. 378; 42*). Another way of putting it is to note with Zeisel and Tolley (*47, p. 258*) that "the proportion of all workers employed in goods-producing industries fell from 51 percent in 1947 to 46 percent in 1957 and to 42 percent in 1962" (*47, p. 258*). Meanwhile the average workweek has been dropping steadily for a century, from 69.8 hours per week in 1850 to 37.5 hours per week in 1960 (*47, pp. 258–259; 42*). In the decade and a half following 1947, more than 4 million government jobs were added. This may be compared with the following figures noted by Zeisel and Tolley (*47, p. 259*): "In 1962, local governments (cities, counties, schools, and other districts) employed over 5 million workers; about 55 percent of the public employment total. State governments, with over 1.7 million workers, had some 20 percent of the total, and the Federal Government, with about 2.3 million, 25 percent."

This, then, is the background of the present picture. Our efficiency in producing goods has released manpower and made it possible to support a larger population. Some of these have been picked up in new industries. But at the same time, growing management, service, and administrative complexities and possibilities (not to mention economies of scale) have encouraged the growth of large-scale organizations.

Changes in the distribution of occupations

Basic continuing changes in the distribution of occupations affect the duties, skills, and physical characteristics required of the people in the work force. Some of the net effects of these changes are to specify the duties of particular occupations more rigorously, to raise the required skill levels, and to reduce the demand for physical strength. The following are some of the specific changes in distribution of jobs and occupations which have been occurring.

OBSOLESCENCE.—Every year, a number of occupations tend to go out of date, such as those being replaced by automatic machinery. This process occurs by cutting back the number of positions available in a certain occupation. Technological changes have sharply restricted employment in unskilled labor—dropping them by about 10 percent between 1950 and 1960. Some of this effect is doubtless reflected in the fact that employment in forests, fishing, and mining dropped by 29 percent during the 1950's. Other industries once employing large numbers of unskilled or semiskilled persons have shown similar trends: during the same period employment in furniture manufacturing dropped by 10 percent; in the metals industry it decreased by 26 percent; and in the textile industry employment fell by 23 percent (*47, p. 262*).

EXPANSION OF WHITE-COLLAR WORK.—Increases in the governmental and service sectors have also greatly influenced the overall picture. Highlighting a trend noted for at least a half century, employment in professional, technical, and kindred occupations increased by 47 percent during the 1950's. Also, clerical workers increased by 34 percent, service workers by 25 percent, and sales workers by 20 percent (*47, p. 260*).

EMERGENCE OF NEW OCCUPATIONS.—Emergence of new occupations is not so easy to document statistically. But obscured by the broad categories in which occupational changes are presented lies the growth of occupations that previously did not exist, or which are so radically different from their predecessors that they may be considered changes in kind rather than degree. The space and missile industries have provided many of these. Increasing specialization and the growth of cross-disciplinary fields in science provide others.

New duties for old occupations.—Like the above, documentation is difficult to provide here. But the phenomenon is real nonetheless. Perhaps one of the more outstanding examples is to be found in farming. Consider the farmer at the turn of the century. Self-powered equipment was practically nonexistent. Because the market economy was not as all-pervasive as today there was little demand for production records. Nor was there much demand for literary skills. Today the farmer cares for tractors and other powered equipment and many other devices made possible by such machinery, while he no longer needs to know much about caring for draft animals. One hardly need point out that today part of his job includes careful estimation of costs and benefits, while another part includes a constant search for new information. In like manner, almost any occupation that has survived the revolution in mechanization of activity has done so by adapting to it, and in the process has been transformed.

Women in the work force.—There has been an increase in the number of occupations requiring social and clerical skills, but which do not require long periods of experience on the job. At the same time the demands for brute strength have dropped off. Simultaneously there has been a relaxation of the taboos concerning work for women. Then, too, many of the routine housekeeping duties which once kept women in the home have been taken over by machines, and a smaller proportion of a woman's life is tied up with young children. Many women now enter the work force several times during their lives. Others are continuously employed on a regular basis. Thus the net effect is that the average age of American working women was recently estimated at around 38 years. Girls in high school are expected to spend about 25 years of their adult lives in remunerative work (*42*).

The general rise in the occupational prestige hierarchy

With a few individual exceptions, there is a long-term upward drift in the occupational structure. On the whole, obsolescence eliminates low prestige occupations. The expanding white-collar sector, too, consists of occupations which are substantially above the bottom of the hierarchy. Also, the newly emerging occupations appear to be mostly those of high skill requirements and of moderate to high prestige. Finally, many older occupations seem to be undergoing a remarkable degree of upgrading. In recent years public universities have instituted specialized courses, usually short summer sessions, for many occupations which were once believed not to require any information that could not be learned with a few weeks on the job. Not all such courses are short. For example, a few universities now offer degree training leading to both the bachelor's and master's degrees in police work. Also, workers in some fields have organized themselves into voluntary associations which emphasize what is called "professional development." A nationwide secretaries' association, for example, provides a series of examinations over various levels of duties of secretaries and supplies rewards for those who pass them. Obviously, State and national civil service examinations provide the same function by requiring specific minimum standards of performance.

Thus two general changes tend to raise the level of the occupational prestige structure as a whole. One that has received much attention includes obsolescence of old, lower status occupations and the emergence of new occupations toward the top of the system. The other, less well known, consists of the upgrading of old occupations. The material presented in the preceding paragraph merely illustrates this. The main evidence that the net effect of the basic transformations on individual occupations is to raise the entire prestige hierarchy is presented in Hodge, Siegel, and Rossi (*20*). These writers present data on the changes in the prestige of samples of occupations from data taken in about 1925, 1940, 1947, and 1963. Almost all the changes, particularly in the more recent data, are in a positive direction. Data on the social psychological reasons for this do not exist, but one would suppose something like the following is happening. Prestige is assigned to occupations as a reward for applying scarce skills to activities people believe to be important. Occupational upgrading is a process which, by improving the worker's skills, makes his contribution more unusual, and therefore scarcer and more valuable.

Occupational Prestige, Income, and Education

The interpretation just presented, in which changes in the occupational prestige hierarchy were related to occupational upgrading, strongly suggests that changes in education are tied up with the changes in the occupational structure. We shall present data on this later, and will follow that presentation with data on education and income. But first let us review the relations between occupational prestige and education.

Occupational prestige and income

It is well known that the average real income of American families has been rising almost steadily for many years. In his recent work on the subject, Miller presents data showing that between 1929 and 1962 the average real personal income per family, calculated in 1962 dollar-equivalents after income tax, rose from $4,200 to $6,400 per year, or to about 155 percent of the earlier value (*25, table I–3, p. 9*). Moreover, all levels of the income distribution appear to be rising at about the same rate, especially since 1944. During this period there is practically no change in the proportion of total personal income received by the top, second, middle, fourth, and lowest fifths of the income distribution (*25, p. 3*). Similarly, there is almost no change in the proportion received by the top 5 percent from 1947 to 1960 (*25, pp. 20–25*).

More to the point, there is a substantial, though imperfect, relationship between annual income and occupational prestige position. Presenting data for full-time, year-round male workers only, for example, in 1960 the median wage of salary income of nonfarm managers, officials, and proprietors was $7,241. That of clerical and kindred workers was $5,247, of operators and kindred workers (roughly, skilled workers) $4,977, that of laborers (except farm and mine) $3,872, that of farm laborers and foremen $1,731. As an important exception, professional, technical, and kindred workers tend on the whole to outrank nonfarm managers, officials, and proprietors in prestige, though their ranks for median salaries are reversed; the former received $6,848. This is probably due in part to the fact, to which we referred earlier, that prestige includes nonmonetary returns. The trend data, of course, are approximately consistent with the above. From 1939 to 1960 the increase in median income for male workers was 221 percent. For nonfarm managers, officials, and proprietors it was 238 percent. For clerical and kindred workers, and operators and kindred workers it was 325 percent. It was 280 percent for laborers (other than farm and mine). Finally, for farm laborers and foremen it was 189 percent. (Note that operators, etc., experienced a disproportionately high increase, while farm wageworkers suffered a disproportionately low increase.) The figure for professional, technical, and kindred workers is 251 percent (*25, table III–6, pp. 82–83*).

Occupational prestige and education

Everyone knows that occupational prestige and education are positively correlated. Nonetheless a few data on the subject may not be out of place.

Duncan and Hodge present 1950 data, drawn from about 1,100 men in Chicago in 1951, on the relationship of educational attainment with occupational socioeconomic status (*9, 10*). Their covariance data can be easily reduced to pearsonian correlation coefficients by taking the square roots. When this is done the correlation is shown to be about $r = +.55$. In another project, based on questionnaire data taken first in 1948 on 383 boys who were then juniors and seniors in Jefferson County, Wis., and who were restudied in 1955, Sewell and his colleagues found a similar correlation between educational attainment and occupational prestige: $r = +.60$ (*33*). For a one-third random sample of Wisconsin seniors in 1948 who were restudied in 1955, Sewell found correlations on these variables of $r = +.62$ for males and $+.43$ for females (*33*). For the subsample of this group, consisting of farm boys, Sewell, Haller, and Portes found a correlation of $r = +.58$ (*36*). Except for one's occupational prestige status at earlier periods (*9*), it appears that no other factors have ever been shown to be so highly correlated with occupational prestige status.

These data support what we already knew in that they show occupational prestige status and education to be tied to each other. One could easily argue that several practices are in fact tightening the dependency of occupational achievement on education. There appears to be professionalization of an increasing number of occupations. Along with this, it appears that there is an increase in licensing and other procedures specifying minimal formal educational requirements for various occupations. Some large companies use college graduation as a necessary condition for employment in management and technical jobs. Finally, we have already noted that many may move up in their organizations only by passing examinations, and that some voluntary organizations encourage self-improvement by means of examinations and awards for superior work performance. If these observations are well-founded, they imply that a general rise in the educational levels of each major occupational prestige level has been going on for some time.

Evidence on changes in median years of school completed show this to have been occurring. Between October 1948 and March 1964 the median educational levels for all civilian workers 18 or more years old rose from 10.6 to 12.2 years. For males the change was from 10.2 to 12.1 years; for females from 11.7 to 12.3 years (*46, p. 227*). A study of the detail of these data shows that from 1948 to 1962 the median number of years of school completed rose for almost all occupational categories for both males and females. Interestingly, rough calculations show that white-collar occupational classes such as professional, managers, clerical workers, and sales workers advanced but little (about .2 year on the average) during the period. On the other hand, blue-collar occupations such as craftsmen, operatives, laborers, and farmers advanced substantially (about 1.2 years on the average). Does this mean that while educational requirements are stiffening at all occupational prestige levels, they are stiffening most rapidly at the lower levels?

Education and income

The relations between education and income are complicated during the years people are finishing school and starting to work. However that may be, education appears to be a profitable investment. For the male working population of 18 to 64 years of age, 1959 mean average earnings by education were as follows: less than 8 years of school, $3,659; 8 years, $4,725; 1 to 3 years of high school, $5,379; 4 years of high school, $6,132; 1 to 3 years of college, $7,401; 4 years of college, $9,255; 5 or more years of college, $11,136 (*25, table VI–3, p. 139*). In other words, those who completed at least 1 year beyond college averaged much more than did those who completed less than 8 grades of school.

For both whites and nonwhites, men with more years of education make more money. But there are important differences related to race. Though off the immediate topic, race differences deserve attention here because they are involved in the whole issue of variations in occupational achievement. From Miller's data, the 1959 earnings of nonwhite men have been calculated as a percentage of those of white men (*25, pp. 139–140*). On the average, American white men between 25 and 64 years of age earned 87 percent per year more in 1959 than comparable nonwhites. The respective means are $6,112 for whites and $3,260 for nonwhites. In the North and West whites earned 50 percent more than the amount earned by nonwhites, while in the South the figure rose to more than 100 percent. It might be tempting to attribute these differences to race differences in number of years of school completed. But this is not the case. With but one minor exception,[3] for each category formed by cross-classifying major regions by age groups and by years of school completed, white men earned more than nonwhite men. Controlling for education, the earnings of whites range up as high as 200 percent of those of nonwhites (among southern men completing 4 years of college). Perhaps most important of all, for every category of age and region, the greater the number of years of school completed, the greater the proportionate and absolute difference in earnings. It seems unlikely that this trend is due just to discrimination on the job. It is more reasonable to suppose that the higher the level in school the more superior is the quality of education received by whites. This would be reflected in increasing differences in competence and finally in the observed increasing proportional differences in earnings (*25, pp. 139–140*). Thus the discrimination most affecting differences in earnings would have occurred during the school years and would have been first manifested as poor education.

Summary

The sociologist measures occupational achievement by assessing the prestige of the person's occupation. Money income is not the only reward for high achievement, and occasionally it is used to attract workers to undesirable jobs. Thus the correlation between money income and occupational achievement (prestige) is far less than perfect. But, though imperfect, such a correlation exists and it is positive: on the average, the higher the prestige of the occupation the higher the income. Next, as we would expect, occupational prestige and education are positively, though imperfectly, related: The higher the education the higher the occupation. So we would have assumed, as many have, that if one is paid for his work contribution, and derives much of his work ability from education, then differences in years of school completed should ultimately result in differences in income. Data were adduced to show that this occurs. But in the process we discovered that the income derived from increasing the number of years of school completed is substantially greater for whites than for nonwhites. The question was raised as to whether this might be due to variations in the quality of education received by whites and nonwhites. Suggestions for answering this question are presented later in connection with a more systematic analysis of the factors influencing educational achievement.

Rural-Urban Variations in Educational Achievement

Clearly, education comprises the most important class of variables needed to account for variations in occupational achievement, and most research efforts have been directed to this end. Shortly, we shall proceed to review some of the evidence on this subject and shall ultimately attempt to provide the beginnings of a social psychological explanation for these variations. But before doing so it will be useful to show the rural-urban variation in our central variables. To do this we shall first present the evidence that rural-urban differences in nonfarm occupational achievement do in fact exist and then show the relation of region and race to rural and urban residence. Some of the most intriguing evidence on what seems to be in part a rural phenomenon is presented in the form of regional or racial categories. We shall then present data on rural-urban differences in educational achievement, using regional and race data to supplement them.

Rural-Urban Differences in Occupational Achievement

For some time, evidence has been available regarding rural-urban differences in occupational achievement. Most of this work is cited elsewhere (*5, p. 10*). In general it shows that farm-reared men have low levels of occupational achievement, that men reared in small towns have somewhat higher levels, and that urban-reared men have still higher levels. These comparisons are based on the nonfarm population. Less evidence is available for women. The best available data, taken in 1952, show that farm-reared women have lower levels of achievement than nonfarm-reared women. Both of these groups have lower levels of achievement than urban-reared women (*12*). Truly up-to-date information on this topic appears not to be available. In 1964, the U.S. Department of Agriculture issued a report based on a 1958 national sample, drawn by the Bureau of the Census, of 35,000 households (*1, table 8, p. 13*). Data were taken on noninstitutionalized civilians 18 years old or more. Despite the age of the data and the fact that the categories are a little broader than would be ideal for present purposes, they are still the best available. Data are presented for the employed nonfarm population, classified by white-collar, blue-collar, and farm occupation, by farm or nonfarm birthplace, and by age. Analysis shows, first, that the farm-born, as expected, turn out to be underrepresented in the ranks of the white-collar workers and overrepresented among blue-collar workers. Second, the percentages change but little with the age of the worker. For example, in the 18 to 24 age group, 34 percent of the farm-born were in white-collar jobs, while 53 percent of the nonfarm-born had such jobs, a difference of 17 percent. Similarly, in the 45-54 age group 37 percent of the farm-born had white-collar jobs, while 51 percent of the nonfarm-born had such jobs, a difference of 14 percent.

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[3] In the West nonwhite men 18 to 24 years old who had completed less than 8 years of school earned slightly more than comparable whites ($2,274 to $2,151).

Moreover, the age-related changes give no hint that the influence of farm origins on low levels of nonfarm occupational achievement may be decreasing with time. If anything, they suggest the possibility that such differences may be gradually widening. These trends are clearer when followed by calculating farm-born versus nonfarm-born differences in the percentage who became blue-collar workers. Among those 65 and over, only 3 percent more of the farm-born than of the nonfarm-born became blue-collar workers. Among those 55 to 64 years old the difference is 7 percent. Among those from 45 to 54 years, the difference rises to 12 percent. For those 35 to 44 years of age and for those 25 to 44 years of age, the difference is 13 percent. Finally, for those 18 to 24 years of age, the difference rises to 17 percent. What is happening is that the younger the group, the smaller the proportionate contribution of the farm-born to the white-collar stratum; and the larger the proportionate contribution of the farm-born to the blue-collar stratum. An important part of this effect comes about because the farm-born from 18 to 24 years of age up to 45 to 54 years of age are contributing to the blue-collar stratum a proportion which earlier the older farm-born contributed to the then larger farm operator stratum.

For the farm-born sector of the country as a whole, the data thus confirm a finding encountered in various parts by using several different indexes of rurality. The nonfarm levels of occupational achievement of rural people are substantially lower than those of the rest of the population.

Rural-Urban Aspects of the Regional and Racial Distribution of the Population

Today, the best single index of rurality of a region is still the proportion of the region's population who live on farms outside urban places. By this measure the South remains the most rural of the major regions of the country. It should be recognized that the farm population is decreasing at a rapid rate—4.6 percent per year between 1960 and 1965. Also, there may well be important regional differences in the rates of our flight from the land. Indeed, between 1960 and 1965 the number of nonwhites residing on farms decreased by 41 percent, while the number of whites decreased by 17 percent. Since many nonwhites live in the South we can be sure that region is catching up with the rest of the country in this regard. Yet, when all such qualifications are taken into account, the main concentration of farm people is in the South. For example, in April 1965, 44 percent of the farm population resided in that region, while the South's proportion of the total population was about 20 percent (*44*).

Rurality is also confounded with race. Of the nonwhite population (four-fifths of whom are Negroes) 16 percent lived on farms in 1965, while 6 percent of the white population did so. So it is doubtless true that a disproportionate number of Negroes still live on farms (*44, 45*). Moreover, practically all of these live in the South; there are almost no Negroes on farms in the North and West.

Rural-Urban Differences in Educational Achievement

We have seen that we need to understand the ways education influences people in order to understand occupational achievement. To understand rural-urban variations in nonfarm occupational achievement we must therefore examine the school performance of rural and urban people. This will be accomplished by reviewing evidence on comparison of school completion as indicated, first, by educational levels of adults, second, by dropout behavior as indexed by school enrollment rates of youths, and third, by achievement and ability test performance. This will set the stage for an examination of the factors determining variations in educational achievement, which is the subject of the next section.

School completion

Nam and Powers have presented the most comprehensive analysis of rural-urban, regional, and race differences in number of years of school completed (*27*). Their report is based on census data.

The data they present show that school completion data are, of course, based on the population no longer of school age. They therefore reflect changes in school attendance which occurred during earlier periods. The 1960 population had completed substantially more years of school than had the 1950 population. This held true among rural and urban people, among northerners, westerners, and southerners. Naturally, this is a continuation of a long-term trend among whites and nonwhites. Yet the rural-urban differences persisted. In fact, for nonwhites the distance between rural and urban people increased a little. The overall pattern for 1960 was as follows: urbanites had completed the highest number of years of school, rural nonfarm people the next, and farm people the least. There were, too, fairly substantial differences among regions. On the whole, people of the South had completed the fewest years of school. Those of the North Central region were next, westerners completing the most. The South, however, was second to the West in proportion of whites who had attended college. As our history leads us to expect, nonwhites had completed fewer years of school than whites. Because of the combined effects of residence, region, and race, we would expect that white urban westerners would show the largest proportions completing college and the smallest completing no more than eight grades. This holds, with the respective percentages being 24.5 (1 year or more of college) and 26.4 (0-8 years of school). The combined effects of these variables also suggest that nonwhite southern farmers would show the smallest proportion completing college and the largest proportion completing no more than eight grades. This, too, holds, with the respective percentages being 2.1 (1 year or more of college) and 85.4 (0-8 years of school). It should be added that college attendance rates during that year were less than 10 percent for all categories of nonwhites except urban westerners *(27, table 1, p. 122)*.

College enrollment in 1960 of American students who were high school seniors in October 1959 has been reported by Nam and Cowhig (26). They found that urban graduates were more likely to enroll in college than were rural graduates, but there was little effect of race on the college enrollment of high school graduates. No data on regional differences were presented.

In summary, though the overall figures were higher in 1960 than in 1950, there were still substantial differences in educational achievement among residence groups in 1960, urbanites first, rural nonfarm people second, and farm people last. Nonwhites were generally low, but were lowest in rural areas. Except for the percentage of urban whites attending college, southerners in each category had the smallest percentage who had attended college and the highest who had not gone beyond the eighth grade. Roughly the same residence trends were observed for college enrollment of 1960 high school graduates. No important race difference was noted, however, and regional variations were not reported.

Dropout behavior

It is easier to talk about dropout behavior than to study it. The term implies a sense of finality that existing data do not plumb. However, the term reflects a common occurrence. Not quite half of the population 25 years old or older had graduated from high school in 1960. No doubt most were drop outs. Enrollment rates of 16- and 17-year-olds of various social categories provide a fairly good way of handling the problem. For 1960, Nam and Powers have analyzed rural-urban, regional, and race differences in this variable quite well. Judging by the high percentage of these age groups enrolled in school (86.3 percent of the 16-year-olds and 75.6 percent of the 17-year-olds) one would suppose that the trend toward completing more years of school was continuing *(27)*. An examination of their data (table 7) shows that the rural population in each region made larger gains in the proportion of these age groups enrolled in school than did the urban population. Over the nation as a whole, the enrollment of urban youth 16 years old increased from 85.2 to 87.5 percent and of urban youth 17 years old from 72.8 percent to 76.7 percent, for gains of 2.3 and 3.9 percent, respectively. On the other hand, the enrollment of rural youth 16 years old increased from 75.5 to 84.3 percent, and of rural youth 17 years old from 62.1 to 73.6 percent, for gains of 8.8 and 11.5 percent, respectively. The largest gains for both rural and urban youth were in the South.

In the years before 1960, an interesting switch occurred. As we have seen, among adults the farm-reared population lags behind both the urban and rural nonfarm. By 1960 the farm population had crept ahead of the rural nonfarm people. Indeed, the highest single level of enrollment of 16-year-olds, including urbanites, is to be found among the rural farm population of the North Central region, and the highest two categories among 17-year-olds are the rural farm population of the West and the North Central regions.

But looking at the 1960 overall picture, the differences are small between urban, rural nonfarm, and farm groups of these ages. The urban and farm categories are about equal, with the rural nonfarm lagging slightly behind. By regions, the West was highest, followed by the North Central States, the Northeast, and the South, in that order. Nonwhites lagged behind the total population by about 8 or 9 percent.

Looking at some of the finer details, we find that the enrollment rate for northeastern nonwhite 17-year-olds, 55.7 percent, is the lowest of all. The Nam-Powers data also show that among rural nonfarm population of the Northeast the enrollment rate for 17-year-old nonwhites lags by 20.7 percent (75.9 minus 55.7 percent), which is the greatest single racial discrepancy. Other important racial discrepancies include the following: north central 17-year-old rural nonfarm youth, 16.1 percent (77.9 minus 61.8 percent); northeastern rural farm youth, 15.3 percent (86.0 minus 71.7 percent); northeastern urban youth, 13.5 percent (76.2 percent minus 62.7 percent). (Curiously, in the Northeast, the nonwhite farm 17-year-olds fared slightly better than the average for all farm youth of that age, 80.5 and 75.6 percent, respectively.) Contrary to popular opinion, the South showed the least racial discrepancy in school enrollment of 16- and 17-year-olds.

In summary, the 1960 variations in enrollment rates for 16- and 17-year-olds were not as great as those for school completion. This is true for rural-urban residence, region, and race. There was not much difference between urban and farm youth, but rural nonfarm were behind. Though it was behind the rest of the country in most enrollment rates of 16- and 17-year-olds, the South had the smallest racial discrepancy and indeed had higher than average enrollment rates for nonwhite residents of rural nonfarm areas.

Achievement test behavior

Coleman and his colleagues have recently produced the most comprehensive and thorough study ever done of regional, residence, and racial differences in test performance and of aspects of the environment of public school children thought to be relevant to the quality of education (*6*). Considerable information was collected, including data on individual students, their teachers and guidance counselors, and their schools. Perhaps most important, the data were collected on all children in grades 1, 3, 6, 9, and 12 in a sample of the nation's schools. Reasonably complete information was available from 70 percent of the high school principals and from 67 percent of the high school classes whose students were tested. Special checks appear to show that though sampling biases were introduced, they do not affect the outcome substantially.

Within any grade studied, all students in the sample took the same set of tests. Thus the data within a class are essentially comparable. The data we shall summarize at this point are the results of the tests of (1) verbal ability, (2) nonverbal ability, (3) reading comprehension, and (4) mathematics achievement. There is no need to make a deep analysis of these tests here. It is enough to point out that the science of test-building is quite well-developed. These tests, taken together, detect differences among students in their abilities to understand what they read, to make logical deductions and inductions, and to manipulate numbers and mathematical symbols. These abilities—learned or unlearned—are the basic mental skills needed for coping with and contributing to contemporary urban-industrial society. There are but two glaring omissions in the tests—the failure to assess the individual's capacity to cooperate with others, and his ability to communicate orally and in writing. These omissions are, unfortunately, characteristic of much of the otherwise admirable work of modern educational testing.

Standard tests of each of these four variables (and some others we are ignoring here because they seem less basic) were administered to each student in each of the five grades (1, 3, 6, 9, and 12), except that the first graders did not take reading comprehension and mathematics achievement tests. The test data which are most important for present purposes were reduced to percentile and *T*-score form ($\bar{X} = 50$ and $\sigma = 10$) and are presented in graphs. Most of the results reported here are from analysis of the graphs.

Test response data are presented for residence (metropolitan and nonmetropolitan location of school), race (whites and Negroes), region (South, Southwest, North, and West—sometimes Northeast, Midwest, and West).[3] In addition, data are presented for various minority groups: Puerto Ricans, Mexicans, Indians, and Orientals. These groups, unlike the others, are not subdivided by region and size of place. To anticipate a bit, the Orientals tended to perform about like the whites do. For this reason we have taken no special note of them in the ensuing presentation, although the other minorities receive some attention.

We have studied the crucial tables from the Coleman report (*6, pp. 221–245*) and have summarized the main apparent effects of metropolitan-nonmetropolitan location, region, and race for each of the above tests.

(1) Verbal ability—Those attending metropolitan schools appear to outperform those attending nonmetropolitan schools at all grade levels tested: 1, 3, 6, 9, and 12. For the lower grades (1 and 3) there is no discernible effect of region. For the higher grades (6, 9, and 12) the Northeast and Midwest appear to be highest, the South lowest, and other regions in between. Whites outscore Negroes in all grades; this is the most outstanding effect. In the 6th and 9th grades the Puerto Ricans, Mexicans, and Indians do poorly, but this effect is not present in the 12th grade, possibly because the lower scorers have dropped out.

(2) Nonverbal ability—Little if any metropolitan-nonmetropolitan effects are noticeable for grades 1 and 3. In grades 6, 9, and 12 the metropolitan are higher. Neither is there any obvious effect of region in grades 1 and 3, except for an analogies test in grade 3, where the Northeast and Midwest were high, and the South low, with others between. This latter regional pattern also holds for grades 6, 9, and 12 except that for grade 6 the Southwest is about as low as the South. Whites systematically outscore Negroes, and in grades 6 and 9 the Puerto Rican, Mexicans, and Indians are again low.

(3) Reading comprehension—Again, there is not much, if any, effect of metropolitan-nonmetropolitan location of the child's school (an index of the rural-urban variable) on reading comprehension for grades 3 and 6. First graders did not take this test. In grades 9 and 12, however, the metropolitan students tend to be higher than the nonmetropolitan. Next, there is no discernible regional effect in the data on 3d graders. But among 6th, 9th, and 12th graders, those from the Northeast and Midwest

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[3] The Northeast evidently includes New England and the other Eastern Seaboard States south through Washington, D.C. The Midwest evidently includes all other States bordering on the Great Lakes plus Iowa, Kansas, Missouri, Nebraska, and the Dakotas. The South includes Arkansas and all States on or east of the Mississippi River not already identified. The Southwest includes Arizona, New Mexico, Oklahoma, and Texas. The remaining States including Alaska and Hawaii constitute the West.

tend to outperform those of other regions, while those from the South (and in the case of grade 12, the Southwest) tend to perform at a lower level than the others. Again, whites systematically outperform Negroes. In grades 6 and 9 the other minorities (Puerto Ricans, Mexicans, and Indians) are low, but as on previous tests this effect does not persist into grade 12.

(4) MATHEMATICS ACHIEVEMENT—The pattern of influences on mathematics achievement of students is similar to the patterns we have already discussed. By the 6th grade, metropolitan students tend to be outscoring the nonmetropolitan students, though there is little difference among 3d graders. There is no regional difference in mathematical achievement in the 3d grade. But in the 6th grade the northern children make higher scores and the southern and southwestern children make lower scores, with westerners in between. In the 9th and 12th grades, the northerners and westerners appear to be about equal to each other and score higher than the southern and southwestern students. Again, whites systematically outperform Negroes, and the low scores for Puerto Ricans, Mexicans, and Indians which persist through grades 3, 6, and 9 are no longer evident in grade 12.

There is one unusual fact about the mathematics achievement data. The distribution for Mexicans, Puerto Ricans, Indians, and all categories of Negroes is sharply skewed in the 6th grade. This skewing results from a large proportion having exceedingly low scores which are about equal to each other; the high scorers are much more variable. The same phenomenon is observed in the 12th grade metropolitan western and nonmetropolitan southern Negroes. It appears in no other grades or categories of students, and on no other tests. One could hypothesize that since mathematics is a difficult subject—or is thought to be—a poor performance in mathematics is one of the earliest symptoms of readiness to drop out of school. A great many minority group members, we might suppose, are already disheartened with school by the 6th grade. This is reflected in their mathematical test performance, and they drop out at the first opportunity. This eliminates most dropout-prone Mexicans, Indians, and Puerto Ricans, as well as many such Negroes. In the nonmetropolitan South and the metropolitan West quite a few dropout-prone Negroes remain to continue into high school, when the same sort of discouragement sets in by the time they reach the 12th grade. This too, is reflected more clearly in their performance in mathematics, a "hard" subject, than in other subjects over which they were tested. We shall return to this type of issue in the next major section.

(5) SUMMARY OF TEST RESULTS—(a) The major finding of the research reviewed here is that at all levels and for all types of tests the performance of Negroes is quite a bit lower than that of whites. Indeed, Coleman and his associates show that the gap between whites and Negroes often widens as the students progress into higher grades. Puerto Ricans, Mexicans, and Indians also tend to do progressively more poorly up to a point between the 6th and 9th grades, after which their performance improves, probably because the poorer students have dropped out of school. (b) The rural-urban variable is approximated here by a metropolitan-nonmetropolitan classification. Differences on this variable are less pronounced than on race. But they exist among 9th and 12th graders for all four tests, among 6th graders for mathematics and nonverbal ability, and among 1st and 3d graders, as well, for verbal ability. (c) Similarly the southern, and sometimes the southwestern, students perform less well than do all others, especially northerners, from the 6th through the 12th grade on all four tests. There is little if any effect of region among 3d graders on any of these tests or among 1st graders on the two tests they took (verbal and nonverbal ability).

Thus, racial differences exist at all levels and for all tests. But, on the whole, residence and regional effects begin to show after the 3d grade. And in all cases it is the categories that are presently or historically the most rural—the Negroes, the southerners, and the nonmetropolitans—which show the poorest test performance.

Summary

The first section explained the sociologist's contention that occupational prestige is the key variable by which to approach the measurement of occupational achievement levels. Secondary data were then presented to show, among other things, the ties of education to occupational prestige. The present section shows first that there are, or were, large differences in prestige levels of nonfarm occupational achievement of people reared in rural and urban areas. These differences justify an investigation of rural-urban, and related regional and race, variations in school behavior. Even so, because the data are based on adults of some years ago, we do not really know whether today's rural youth are still entering the nonfarm occupational structure at unusually low levels, but it would be surprising if they were not.

Data on school years completed by the adult population in 1960 really refer to events that happened years earlier when these adults were of school age. There are substantial differences between people of urban, rural nonfarm, and farm origins. They also show substantial regional and race differences. Regional differences are in this order: the West (highest), Northeast, North Central, and South (lowest). Nonwhites were much lower than whites.

Data on school enrollment of 16- and 17-year-olds in 1960 are more up to date. They show relatively small differences in enrollment rates by residence, and there was no important difference at all between urban and farm youth, though these were a little higher than rural nonfarm youth. Differences between regions were a little greater, in this order: West (highest), North Central, Northeast, and

South (lowest). White-nonwhite differences were not very large either, though they existed. They were almost negligible in the South and tended to be especially large in the Northeast.

Test performance data (verbal and nonverbal abilities, reading comprehension, and mathematical achievement), of children in school in 1965 are obviously still more up to date. They show relatively small differences favoring metropolitan students over nonmetropolitan. (Data are not aavilable for rural nonfarm or farm students as such.) Also, students from Northern States tend to score higher than those of the Southeast and, to a lesser extent, the Southwest (excluding California). The sharpest differences, however, are between whites and other major minority groups: Negroes, Mexicans, Puerto Ricans, and Indians. Moreover, the higher the school grade the farther behind their peers the Negroes fall. One can infer this would be true of the other minorities, except that the poorer students among them may drop out of school earlier, leaving the high scorers to inflate the test averages.

It thus appears that there are some important trends occurring. Rural-urban differences, as such, in precollege school enrollment may no longer be very pronounced. Regional differences in enrollment may also be disappearing. Race differences in attendance seem to be dropping, too. We cannot say for certain whether the "learning gaps" are being closed. From test data, it appears the rural-urban differences as such are not very great, and that regional differences are not either, though nonmetropolitan and southern students have lower scores than others. The race gap in attendance is closing, but race differences in learning may not be doing so, especially among Negroes in the South and Southwest and among Mexicans, Puerto Ricans, and Indians (*6, pp. 257, 258, 272*). Interestingly, there is very little racial difference in college enrollment rates of high school graduates (*26*).

Despite the fact that they are not so different in the externals, such as years of school completed and school enrollment, the rural southern and southwestern Negroes are clearly the students who are least prepared for satisfactory achievement in the modern occupational structure.

Variations in Educational Achievement

Clearly, if we are to understand the occupational achievement process, we must formulate a valid explanation of the educational achievement process. Not that we lack theories relating to occupational achievement. On the contrary, there are several. The current ones are reviewed by Borow (*3*). Among the more influential of these are Ginzberg et al., Roe, and Super. Ginzberg et al. stress stages of occupational decision-making, in which each later stage is more reality-oriented than the former. These begin during the elementary school years and continue until the person is established (*14*). Roe cross-classifies occupations according to level and function, and then attempts to match personality needs (developed early in life) with job characteristics (*31*). Super has stressed the key role of the self-concept in determining the individual's occupational behavior (*41*). The need for objective evaluations of recent large-scale educational programs has probably been partly responsible for an increasing emphasis on interrelating research and theory regarding psychological aspects of vocational development, one which should begin to bear fruit within a few years. No definitive publication has yet come from the newer lines of thinking.

In any case, there are at least three related aspects of most such psychological thinking which make it less useful for present purposes than would be hoped. First, these are theories of "vocational" development as a whole, not simply theories of occupational achievement. Frequently, their major thrust is to understand and improve the adjustment of the individual rather than to determine the process by which people are allocated to different social statuses. This leads to a relative neglect of the occupational achievement process in itself.

Second, most of the theoretical work gives insufficient attention to the occupational hierarchy. Rather than seeing the occupational achievement process as one of entering and becoming stabilized at a point on or region of a continuum of occupational prestige, thus anchoring achievement in the societal system of stratification, most writers see the individual as selecting a relatively unique occupation or class of occupations, one which is not rigorously ordered by a clear specification of its relation to other locations.

Third, and most fundamental, experimental psychological researchers deliberately treat each individual organism as if it existed in exactly the same environment as every other organism, and as if the only environmental influences bearing upon it were those provided by the experimenter. We may call this "the assumption of the isolated individual." In psychology, it is the equivalent to the physicist's experiment in a vacuum, or to the chemist's experiment conducted under "standard conditions." As a methodological ideal for studying certain kinds of behavior, it is highly appropriate. Unfortunately, it pervades much psychological thinking where it is not appropriate, including occupational choice. But the occupational achievement process is enacted in a world in which people influence each other, and in which some influences wane while others wax. A useful theory must be able to identify and specify the changing effects of each of the variables needed to describe the interplay between each person and his changing social environment.

SOCIAL-PSYCHOLOGICAL PERSPECTIVE—The present position attempts to allow enough individual plasticity to account for major changes in the person's modes of reacting to his environment, while at the same time avoiding the assumption of infinite plasticity. Three assumptions are made about the great majority of youths whose school behavior is the concern of this section: (1) That most of those who do well or who do poorly in school are usually so similar in the *biologic* aspects of mental ability that, for the most part, we can assume that *environmental* factors are ultimately responsible for variations among them in achievement. (2) That the behavior of people is directed by the ways they conceive of themselves, by their goals, and by the available information that might aid them in achieving their goals. (3) That self-conceptions, goals, and other information are learned in and sustained by interaction with others. We shall elaborate each of these points.

(1) One of the major learning tasks in the life of any person is largely finished even *before* he or she enters school. It is a task of huge proportions, yet practically all 4- or 5-year-olds have, for the most part, completed it. Children in all societies, even the so-called primitive groups, perform it well. Most of the best and the poorest students differ little in this respect from other youngsters: they have learned a language.

What does it mean for a child to learn a language? It means that he has learned an enormous number of details and general rules. He has learned a vocabulary of words and how to put them together into an ordered system. He has learned a grammar. It is true that ordinarily he makes more mistakes with his grammar than do adults, but his mistakes are so few that he can understand his parents, his friends, and others—even strangers. He can usually respond or initiate to them so that they understand the meanings he attempts to convey. To the child, learning a language is as natural as exploring his neighborhood. As adults, we cannot recall our own first experiences in learning our native language, but we remember when we tried to learn a foreign language. Perhaps we studied it for 2 or 3 years in high school or college. We remember the great difficulty we had and the hours we worked to learn the words, to conjugate the verbs, and above all to place subjects, predicates, etc., in their proper places in sentences. But for all our hard work, we know very well that our understanding of the language is still superficial. If we do not realize it while we are in school we soon find out when we meet someone who handles the language fluently.

Yet the child learns the language of those around him so thoroughly that, despite a few idiosyncracies in grammar and pronunciation, he is a master of it. He speaks and listens almost effortlessly; certainly he does not usually struggle to remember what a certain word means, as most of us do when we use a language other than our own.

Most students have few if any major physical impediments to seeing, hearing, speaking, understanding, getting around. They know a language; they have already proven that they can learn exceedingly difficult material because they learned the language. And they daily prove to us that their fundamental intellectual capability has not eroded because they continue to communicate with a directness and facility that would astonish us if we ourselves were not so accustomed to it.

Surely, when poor students have already mastered so complex a subject as a language, it is wise to look toward social factors rather than biological factors such as brain damage or poor heredity to explain the fact that they are not doing well.

(2) All psychological points of view on behavior conceive of the person as an active agent. Some such points of view stress organismic factors which limit abilities. Others stress "deep" motivations, developed in the early years, of which the person is unaware. The social-psychological view used here differs from the last two in that it assumes that man acts on the basis of the way he conceptualizes his environment, himself, and his future alternatives. Among his alternatives he may select some; these become goals. When he works toward achieving a goal, his conceptions of himself and his environment direct the ways he goes about it. His style or level of behavior, then, is to be explained largely in terms of things he hopes will come to be rather than in the terms either of variations in native ability or of motivations developed long ago.

This does not mean that individual differences in personality are necessarily trivial or uninfluential. It does mean that most of the ones we know about are learned. When we look for factors influencing the process of differential education achievement, we shall be especially concerned with those that may vary the alternatives a young person can see as possibilities. We shall also be concerned with factors which make him conceive of himself as unable to learn, and to factors which make him think good schoolwork is meaningless.

(3) Most psychological factors in educational achievement are learned, directly or indirectly, in the person's contacts with other people. Teachers', parents', and friends' responses to the young person's attempts to interact play a major part in determining his view of himself. If they let him know they think he is stupid, he learns to think he is stupid. If they let him know they think that he is bright, he learns to think he is bright. If those around the young person have and share with him a rich knowledge of the world, he too will ordinarily develop a rich knowledge of the world. This will provide him with many goal alternatives from which to choose, and a wealth of information to make his choices rational. On the other hand, if those around the young person do not have or do not share with him a very adequate knowledge of the world, his alternatives will be few and the information on which to base his attempts to enact them will be inadequate.

It should be stressed that a social psychological point of view is somewhat different from the individualistic position, to which we have referred, that seems to dominate much of contemporary educational psychology. One variety of the individualistic position, in the extreme, holds that the performance of students depends largely on *inherited abilities*. In turn these abilities are thought to be due primarily to genetic defects in his parents. Another variety holds that *behavior orientations*—ability for one—are developed in early life and are not particularly changeable. These individualistic positions hold, in effect, that little if anything can be done about a student's poor school performance. The social-psychological position on the other hand, holds that a person's knowledge, goals, and self-conceptions determine how well he does, and that in turn these variables are almost entirely due to factors in the *social environment*. Parents, for example, influence the education of their child, not primarily through the genes, but because they may or may not stimulate him, may or may not help provide appropriate goals and self-concepts for him, may or may not provide effective help in teaching him. Other people influence him in the same way.

This is not to say that mental ability is unimportant. On the contrary, intelligence scores are correlated with performance in school at all levels. But intelligence is not a simple phenomenon. To be sure, there is evidence of genetic effects on it, but there are important, and perhaps changing, environmental influences on it as well (*13, pp. 191–207; 39, pp. 584–586*).

Environmental Influences

If we want to understand and to affect educational achievement we must understand the system in which the person's achievement behavior is conducted, which is the same thing as determining the variable aspects of his environment that influence his behavior as he progresses through school. We are only beginning to learn how to analyze these factors systematically. Obviously, we must have concepts for describing the environment. One main distinction we draw here is between the general environment and the effective environment.

The general environment

By the term "general environment" we mean to indicate all variables describing the amount and accuracy of information which, objectively, is readily accessible to all or most persons in a geographic area. For the topic of educational and occupational achievement, the term refers to all such information indicating what a person might do in order to be successful in school or at work. Geographically, for a given topic like success in school or at work, the bounds of such an area would be determined by discovering lines indicating major changes in most important variables describing the amount and quality of information objectively available on the topic. This has never yet been done with any precision. Nevertheless approaches have been made, though not necessarily deliberately. One of the most informative large-scale examples is provided by Coleman and his associates, in the study of regional differences in educational facilities (*6*).

Other examples, on a much smaller scale, are provided by Sewell and Armer (*34*) on neighborhood contexts as possible influences on college plans, and by Haller and Sewell (*18*) on local area and school class as possible influences on farm boys' occupational choices. To get a bit ahead of the data, large-scale general environments, such as regions of the nation, seem to have profound influences on everyone but small differential effects on particular individuals. Small-scale general environments, such as local areas or neighborhoods, are not very influential (*18, 34*).

EDUCATION AND THE GENERAL ENVIRONMENT—Information relevant to success in school and in the work-a-day world is objectively available to the young person from a variety of sources. Television sets are in nine-tenths of the homes of the United States, excellent roads connect practically all parts of the country, and schools serve every hamlet. Communication outlets provide the possibility that all would have equal access to the information necessary for everyone to have equal advantage. Nevertheless there are differences among sectors of the population. Schools that are far from major population centers and schools in poorer economic areas sometimes lack the facilities and the teachers to motivate and teach the students well. Nevertheless data from the Coleman report show that most such differences, except for the rural South, are no longer very great (*6, pp. 36–217*). Also, areas isolated from the population centers may have somewhat fewer occupational alternatives available for the young person and his family to choose among. In such areas, the connections between education and the occupational structure may not be so clear. This is doubtless partly because well-educated youth who are born and reared in the area, and are therefore known well by local people, usually take jobs elsewhere (*27, p. 116*). They must even leave home in order to become educated and stay away in order to find a job that can let them express their education. The outcome is that the general environment of such places is somewhat poorer in information which young people need in order to make satisfactory educational and occupational adjustments later on (*15; 32; 35; 37*). Almost everyone in the area is influenced in this way—the child, his parents, his teachers, his friends.

But whether or not they live in population centers, the child, his family, and his friends belong to a certain racial group and socioeconomic stratum. With a long history of poor educational facilities and ill-prepared teachers, Negroes and members of some other minority groups such as Indians, Mexicans, and Puerto Ricans, tend on the average to be poorly educated. The same is true of those from the lower socioeconomic strata. A person's interactions may be restricted to others like themselves. Because of this, their goals and beliefs regarding education are usually much like others of their group.

We have dwelt upon the general environment at length for a reason. Large-scale general environments have important effects on everyone within them because they limit or provide the information everyone has to share with everyone else. But they have little or no effect on variations among persons within such an environment. Factors in the effective environment do this. Moreover, despite much speculation about their effects, small-scale general environments have little effect on the people within them.

The effective environment

By the "effective" environment we mean those parts of the person's social environments which vary substantially from individual to individual and which account for individual differences in behavior. The elements of a person's effective environment consist of the information presented to him and emphasized as important for him by other people whose judgment he respects. These people are prehaps more precisely called "significant others" *(40)*, although some have referred to them as "reference groups." The exact persons who perform this function vary to some degree from individual to individual and from one type of behavior to another. The evidence that parents, peers, and school personnel frequently become significant others regarding educational and occupational decision-making is available in brief summaries *(5, pp. 17–18; 38)*. The concept of significant others has not yet received the attention needed to make it most useful for research. Nevertheless, variables based upon it, especially the individual's conception of the expectations of significant others, are among those most highly and systematically related to educational and occupational choice behavior *(8; 19)*. There are other important aspects of the effective environment, too, such as the information a youth receives about himself from the grades his teachers give him, or the respect or disrespect accorded to him by others with whom he interacts.

Stages in Educational Achievement

The young person is constantly being evaluated by others. Students receive good marks if they do well in school according to the standard of the teachers and if they are conscious of being highly esteemed by others. Those who do poorly are punished by low marks, and are in other ways constantly reminded of their poor work. They know that in the context of school behavior they are not esteemed by others. To the child in school, a large part of the day-to-day process of educational achievement consists of being rewarded or punished for conforming to or deviating from the expectations of teachers and others.

The stages

Ignoring for the moment the learning the student really receives, there are from this perspective two main variables describing educational achievement: getting better or poorer marks and reenrolling or "dropping out." As used here, the last variable also includes passing from one grade to another and graduating, as well as school leaving at graduation time rather than in the middle of a school year. In elementary school one cannot, in most States, leave school; attendance is compulsory. Students who get good marks are advanced. Sometimes those who do not are held back and become "over age in grade." In most States there is a special age or school year at which a youth can legally leave school. After that age students may leave at any time, and those who are not doing well frequently choose this course. Usually this occurs at the more "respectable" periods, the end of a school year or after a graduation point. The recurrence of a series of points at which legal and "respectable" school leaving may occur, forms the boundaries between what we are calling stages in the educational achievement process. These are continuing beyond the legal minimum requirement, (indexed by leaving or not leaving school in the early days of high school), continuing beyond high school (indexed by enrolling in a post-high school program of education), completing a certain number of years of college, graduating from college, and obtaining a higher degree in a university. (It should be recognized that these stages are somewhat arbitrary and should not be reified.) Marks are given at all levels and may, therefore, be used as indications of achievement during any one stage. Reenrollment or termination at the end of a stage is of course another way to measure educational achievement, as is the number of years of education completed.

Emergence of achievement variables

The concept of stages implies that new variables come into existence at different points in the young person's progress. During the first years, the basic causal variables, other than the attitude of the teachers toward the student, are evidently intelligence (learned or unlearned) and family socioeconomic status. Shortly afterward the child's conception of himself as a learner—a self-conception, in turn, learned from others—begins to exert an influence on his performance. Being over age in grade begins to exert a negative influence on the child while he is still in grade school. Perhaps as early as the later elementary grades, parents may begin to formulate and communicate to the child their expectations regarding college, which in turn influence the young person's college plans. Levels of occupational aspiration are also developing at this time. This concept, which is explained later, refers to the level of the occupational prestige hierarchy toward which the young person orients himself. At this point, college plans and levels of occupational aspiration are already correlated with grades in school (grade point average, or GPA), but they are probably dependent variables rather than independent variables at this time.

By the later years of high school, one's conceptions of his ability to learn, his college plans, and his levels of occupational aspiration are all probably functioning to some extent as independent variables, influencing grades and dropout behavior (and, later, college enrollment and years of college completed). Parental encouragement to attend college probably also begins to exert its influence at this time.

Level of occupational aspiration

Most of the variables used here, such as college plans, are almost self-explanatory. This is not true of the concept "level of occupational aspiration." As we have noted, occupations are arranged in a hierarchy of prestige. Youngsters in school learn to conceive of a certain limited range of points along this hierarchy as appropriate to them. When this happens we say the person has a level of occupational aspiration. Knowledgeable students connect college plans and the occupational aspiration. There is reason to believe that level of occupational aspiration is one of the more important variables influencing both level of educational achievement and level of occupational achievement (*17, pp. 5–16* and *20–40*). For example, in one sample $r = +.64$ (*17, p. 115*). If a youth conceives of himself as oriented toward occupations such as minister, doctor, lawyer, owner of a large business, etc., he is said to have relatively high levels of occupational aspiration. If he conceives of himself as oriented toward occupations of the level of electrician, owner of a small business, plumber, etc., he has aspirations in the lower middle range. If he conceives of himself as oriented toward jobs that do not require any particularly scarce skills, such as common laborer, assembly line worker, etc., he is said to have a relatively low level of occupational aspiration. The same is true of most of those who are "just going to get a job." They, too, have relatively low levels of occupational aspiration. A person's level of occupational aspiration is largely independent of the particular job he is considering. That is, as time goes on many young people change the particular occupation they are thinking of entering. Yet most of these changes are from one occupational choice at a certain level in the prestige hierarchy to another occupational choice at about the same level. For example, a certain professor of history grew up intending to be a lawyer; he changed his specific occupation but the prestige level is about the same. Similarly, a certain boy who wanted to be a minister eventually became a chemist; the fields of his choices are quite different, but the prestige rank is similar. Still another wanted a job as a semiskilled worker in a factory but he now drives a delivery truck; again the jobs are different but the prestige is similar.

How does level of occupational aspiration vary with age, and when does it begin to influence educational plans? One research project looked into levels of occupational aspiration of urban children in the different grades, from the 5th to the 12th (*30*). It was found that 5th graders had already developed fairly consistent prestige levels of occupational aspiration. That is, on the average, all the children selected occupations that were fairly close together in prestige. A boy, for example, who was interested in a high prestige occupation was also interested in other high prestige occupations, while a boy who was interested in a low prestige occupation was also interested in other occupations at roughly the same low level. Those in later grades are still more consistent. In fact, childrens' levels of occupational aspiration seem to become more and more consistent at least until they finish the 12th grade. At all grade levels, children whose measured intelligence, social class status, or school marks were higher, were somewhat more consistent in levels of occupational aspiration than were students whose measured intelligence, social class status, or school marks were lower. Also, apart from consistency, the average levels of occupational aspiration of 5th and 6th graders was found to be higher than those of 8th through 10th grade students. There is a marked rise in levels of occupational aspiration among 11th and 12th graders, probably because of the loss of low-aspiring high school dropouts.

Data on the Educational Achievement Process

Some of the details of the educational achievement process will now be suggested. They are based on scattered evidence from secondary sources as well as on a certain amount of relatively systematic correlational data. The evidence, though incomplete, tends to be consistent and therefore suggests leads for research that needs to be conducted in order to determine more completely the exact nature of the educational achievement process as well as its contribution to the process of occupational achievement.

Sources of data

The correlational data, presented in table 1, are taken from a number of sources, some of which are unpublished. For a number of years a small group of researchers at the University of Wisconsin and Michigan State University have been conducting projects relating to a small number of comparable variables to the educational achievement variables relevant for various stages of the educational achievement process. These, plus closely related work of others, are presented.

Fink measured a series of variables on 355 eighth and ninth graders in Grand Rapids in 1960. Two years later, after the age at which they could legally leave school, he traced them to determine which ones were still in school and which had dropped out (*11*). These data also provide information on grades during late elementary and early junior high school. Haller and Miller studied 432 17-year-old boys in Lenawee County, Mich., in 1957, obtaining data on grade point averages

TABLE 1.—*Zero-order correlations of sequentially ordered school achievement variables with selected social psychological variables*

Social-psychological variables	Stages in the educational achievement process									
	A. Grade point average	B. High school continuation	C. High school grades		D. College enrollment	E. College grades	F. Years of college completed		G. Highest level of education obtained	
	8th and 9th graders in urban Michigan, 1960	(Same as A), 1962	C_1 Rural Michigan 17-yr.-old schoolboys, 1957	C_2 Wisconsin high school senior farm boys, 1948	American high school graduates, 1959	Michigan State University students, 1960–62	F_1 Rural Wisconsin junior and senior boys, 1948–55	F_2 Wisconsin high school senior farm boys, 1957–64	Wisconsin high school seniors G_1 Men, 1957–64	G_2 Women, 1957–64
1. Intelligence	.65	.21	.49	.44	.40	.54	.31	.44	.49	.38
2. Socioeconomic status	.22	.10	.22	.11	.32	.06	.28	.25	.44	.48
3. Parental encouragement for college	.23	.20	.28	.29	[1]	.17	.40	.48	.48	.50
4. Grade point average, prior period	[1]	.26	[1]	[1]	.37	.58	.41	.47	.50	.33
5. Over age in level	−.30	−.35	[1]	[1]	[1]	[1]	−.12	[1]	[1]	[1]
6. College plans	.48	.21	.53	.35	.57	[1]	.40	.43	.69	.75
7. Level of occupational aspiration	.49	.20	.50	.27	[1]	.16	.52	.42	.45	.29

Sources: Groups A & B, Fink (*11*); group C_1, Haller and Miller (*17*); groups C_2, F_1, F_2, G_1, and G_2, Sewell (*33*); group D, Nam and Cowhig (*26*); and group E, Diekema (*8*).

[1] Correlations unavailable.

(GPA) and other variables (*17, pp. 115–117*). Sewell and his colleagues studied all 431 junior and senior boys in school in Jefferson County, Wis., in 1948, noting their GPA's among other things (*33*). These same youth were followed in 1955 and the number of years they completed in college was recorded. Nam and Cowhig present data on the college enrollment of a nationwide sample of 1,170 youth who were high school graduates in 1960 (*26*). Diekema has analyzed GPA data on a sample of about 500 Michigan State University freshmen who enrolled in 1960 and were followed up 2 years later (*8*). In 1957, Little took a random one-third sample of Wisconsin high school seniors (*22*). Followed by Sewell and his collaborators, these data provide the number of years of college completed by Wisconsin farm boys, and the highest level of education—college and noncollege—obtained by males and females (*32–35; 37*).

Analysis of the educational achievement process

The interpretation now presented is based on the correlation coefficients in table 1, together with other data. All data are interpreted in the frame of reference already stated. Naturally, the value of each correlation coefficient is not exact; each is an estimate of the degree of relationship between a pair of variables.

During the first few years of school, a child goes to school because no one around him questions whether he should. His view of the world of work is certainly irrelevant to his education. He knows nothing of the connections between school and work. It is like our wearing clothes or speaking English: we do it because everyone around us does so, and everyone expects us to do so, too. When there is complete unquestioned consensus about going to school, the child simply goes.

When he begins school he has already completed the major part of his biggest learning task: he knows a language. To this point he has no conception of his learning ability; he just learns. But after he is in school he will interact with teachers, parents, and other students in situations where the focus is deliberately on learning. He will be praised when teachers and others think he is learning, and he will be blamed when they think he is not. The teacher will respond more to some children than to others. If, over a period of time, a child tends to do the things that win the approval of the teacher, he will learn that the teacher thinks he is a good student. If his grades and his conversation about school win the approval of his parents and others, he will learn that they, too, think he is a good student. Since he learns what he is from what others tell him about himself, in this case he will learn to think of himself as a capable student. On the other hand, if teachers, parents, and others think of the child as a poor student, he will think the same of himself. Note that in column A of the table there is a high correlation (+.65) of grades with intelligence. However, although these two factors—doing well in school and thinking one is a good student—are closely related, they are not identical. It appears as if the child's performance can make him think of himself as a better student. In turn, as we shall see in the next paragraph, such a self-conception can evidently improve his learning.

Since both of these factors are important, it should be possible to change long-term educational performances by varying short-term performances and by varying self-conceptions of ability. Probably the best way to do so would be to work through significant others. This has been tried and as far as can be determined, it has been successful. Brookover and his coworkers at Michigan State University designed an experiment to change the child's conception of himself as a learner, thus expecting to improve his performance in school. They used several experimental treatments, measuring both performance in school and self-concept as a learner before and after the treatments. Under one experimental treatment, the parents of children were brought together to learn how to take responsibility for their children's schoolwork. After a number of months the children's conceptions of their ability and their grades in school had both increased significantly. No significant changes occurred in any other experimental groups (*4*).

By the time the child is in the eighth or ninth grade, his conception of his ability is quite well established. Also, more or less in accord with his GPA, he has begun to formulate his levels of occupational aspiration (r = +.49) and his college plans (r = +.48). His parents are already beginning to have college expectations for him (r = +.23), and his family's socioeconomic status is exerting its influence (r = +.22). Finally, presaging what is to come later if he is over age in grade, his grades tend to be low (r = −.30). A circular reaction—poor performance, leading to conceiving of oneself as a poor student, leading to poor performance—has been developed. But this is only part of the story. A whole series of group stereotypes and related self-conceptions have developed by then, and the child's behavior is influenced accordingly. Because pupils who do poorly in school often are held back a year or so, people tend to respond to each student who is over age as if he were unintelligent. Because, on the average, the Negro children or other minority group members do not do as well in school as do the whites, people tend to treat each such child as if he were a poor student. As we have noted, when practically everyone treats a person as if he were stupid, he usually learns to think of himself as stupid. Factors such as these mount up. Children from minority groups or the lower strata often come to be over age in grade; and the influences of this factor then compound the influence of the others.

At a certain time, often about age 16, the law in most place says that a student may quit school if he chooses. Continuation (the reverse of dropping out) is perhaps the most immediate important effect of being over age in grade ($r = -.35$) and of low grades ($r = -.30$). And, of course, once the child has dropped out, it is almost impossible, practically speaking, to reenter. Dropping out of school is but slightly correlated with being from a lower socioeconomic stratum ($r = +.10$), and with having parents who do not expect the child to go to college ($r = +.20$). So also is a low level of occupational aspiration ($r = +.20$) and college plans ($r = +.21$), factors to which we shall return later. And the same is true, to a slight degree, of being of the Negro race (*11*) ($r = +.15$; data not presented in table 1). No one of these factors is itself very highly predictive of dropping out of school. It is our interpretation that all of them function in one of these ways: (1) If a youth has a certain level on some of these variables, it is a source of embarrassment for him, making him feel compelled to leave to avoid being ashamed. This is probably why race, lower class status, low grades, and especially being over age in grade are correlated with dropping out. (2) The other factors, low expectations of parents or low levels of occupational aspiration, signify that school tends to be meaningless to the youngsters who are not doing well and to their parents also. In short, some youngsters probably tend to believe they have little to gain by staying in school, and that they have much to lose—namely self-respect and the esteem of others.

As children grow older they usually begin to grasp, even if dimly, some of the connections between school and later life. Some see these connections earlier and more clearly than others. As a consequence, each tends to develop a level of occupational aspiration and a plan regarding college. If they learn well the connection between schooling and the world of work, then their educational behavior —their number of years in school and their grades— comes partially under the control of their level of occupational aspiration and their college plans, although other variables continue to function. The influence of GPA and these two variables, it should be said, are probably still circular at this time. Note that among Michigan 17-year-olds (column C of the table), GPA was correlated +.50 and +.53 with levels of occupational aspiration and college plans, respectively. Though lower, the correlations of the same variables for the Jefferson County sample are also worthy of consideration (level of occupational aspiration: +.27; and college plans: +.35). It is noteworthy that intelligence is still of importance ($r = +.49$ and $r = +.44$ for the two samples), and that parental encouragement for college is beginning to assume some relevance ($r = +.28$ and $r = +.29$). The correlation of socioeconomic status with GPA is also positive ($r = +.22$ and $r = +.11$).

The data (column D) appear to show that college plans assume, as we would expect, greater importance in influencing college enrollment of high school graduates ($r = +.57$). Also correlated with college enrollment are intelligence ($r = +.40$), high school grades ($r = +.37$), and family socioeconomic status ($r = +.32$). We interpret this to mean that in this stage, college plans have become a clear independent variable, and that the socioeconomic status may also be more influential than before. Intelligence continues to play an important role.

In the next stage, the early years of college (column G), intelligence and grades in high school are by far the most highly correlated with college grades. Evidently among these factors, academic ability is the only one influencing this particular educational achievement variable. Other variables such as college plans, level of occupational aspiration, and parental encouragement for college no longer distinguish sharply among students. They performed their function when they helped separate those who were and were not college bound.

The data in columns F_1, F_2, and G_1 all concern Wisconsin males who were first studied as high school juniors or seniors. (The sample in F_2 is a subsample of G_1). They include not only those who started to college but also those who did not. On the whole, they show a remarkably even pattern, in which four variables stand out as especially important: intelligence, parental encouragement for college, college plans, and level of occupational aspiration. Ordered by sample for a given variable, the respective correlation coefficients are: intelligence—$r = +.31, +.44, +.49$; parental encouragement—$r = +.40, +.48, +.48$; college plans—$r = +.40, +.43, +.69$; and level of occupational aspiration—$r = +.52, +.42, +.45$. Socioeconomic status joins these variables in importance in sample G_1 ($r = +.44$), a sample in which college plans have an especially high correlation ($r = +.69$).

Data for females (column G_2) are a little different. College plans is the highest correlate ($r = +.75$). Parental encouragement and socioeconomic status are also noteworthy ($r = +.48$ and $+.50$), and to a lesser extent, so are the ability variables, intelligence ($r = +.38$), and high school grades ($r = +.33$). Level of occupational aspiration is of still less importance to these girls ($r = +.29$).

Levels of occupational aspiration, college plans, and parental encouragement are three variables which apparently tend to propel a youth into college and to sustain him at least at a minimal level of satisfactory performance while there. Ability and socioeconomic status seem also to be of importance in influencing a youth to attend college and sustain him while there. But once in college, as far as sheer quality of performance (grades) is concerned, the ability factors are of paramount importance (column E).

Summary

High ability and several other favorable factors yield good performance in the elementary years. If a youth becomes over age or is otherwise consistently and seriously embarrassed in school, he will drop out as soon as he can. If he continues in high school his performance (grades) seems more to be a function of ability than any other factor studied here. During the late elementary years and during high school, new independent variables are forming: the youth's college plans and levels of occupational aspiration, and his parents' expectations for him. These later factors largely determine whether he will enter college, although staying there depends not only on them but also on ability. Doing well in college, once there, depends largely upon academic ability.

Improving Occupational and Educational Prospects for Rural People

Education for Tomorrow's Occupational Structure

As we have seen here, educational achievement appears to be the main factor influencing occupational achievement. There is no reason to believe that the trend toward upgrading the whole of the occupational structure is going to taper off. The best guess is that it will continue and that education will become even more important for occupational achievement than it is today. Obviously, the sectors of the society that are receiving the worst education will have to improve. On a gross basis, these are largely the people of the rural South and Southwest—especially the Negroes, Indians, and Mexicans—as well as the Puerto Ricans, who are mostly in the metropolitan North.

Variables for Introducing Change

There can be no doubt but that present programs to erase the obvious inequities—improving facilities such as libraries, making school attendance compulsory, upgrading teachers, providing trained counselors—should proceed more rapidly in the areas mentioned above, which are farthest behind.

But the rate of change of the whole process can very likely be stepped up if we draw upon the major interpretations presented here.

(1) We need to learn how to identify the persons who are now "significant others" in each individual's educational and occupational decision-making. At the University of Wisconsin, research is now underway to accomplish this objective. When this is done we can organize ways of utilizing these people to improve the young person's performance in school and his self-conception as a learner, and to raise levels of occupational aspiration and college plans of those who can meet the intellectual requirements.

(2) We need to find ways to reduce or eliminate the sense of shame that seems to come with being an over age student. Some older youngsters are not very intelligent, but being over age is evidently influenced by a number of factors not directly connected with ability. There is reason to believe minority group members, whose performance is quite low, frequently leave because they are over age. Reducing this factor might therefore go a long way toward equalizing the educational and subsequent occupational achievement of these people.

(3) Although the correlation between apparent ability and educational achievement is high along the whole course of the achievement process, it is not nearly as high as it might be. In all probability there are, at all stages, quite a few students of high potential whose achievement levels could be raised. It might be possible to work out techniques for identifying the more promising of these and to help them improve their performance.

Organizing to Control Strategic Variables

(1) Assuming we can learn to identify "significant others," we will need to learn how to utilize them to influence the individual. If they can be provided with relevant information and can be encouraged to try to exert their influence on the youth, it might well be possible to raise the performance levels of many more people than we can by depending entirely on the traditional direct contact of teacher with student. One possibility would be for cooperation among the school personnel who know what needs to be imparted to the student, and the State extension personnel who are experts in mobilizing local groups to solve problems. This would be especially useful in rural areas.

(2) Conquering the shame of being over age in grade appears to be more difficult. Perhaps special classes geared to reasonably bright people who have fallen behind—rather than being geared to dullards—might be organized in areas with high dropout rates. Separation of these people from others might reduce the shame one feels within the school situation. Providing them with intrinsically interesting but difficult material might simultaneously increase the desire to attend school. It might also decrease the shame one feels about his special school status when he is outside of school.

(3) Improving the educational, and hence occupational, achievement of bright students whose performance is poor requires, first, that the teachers know which students these are. Probably the best way to do this would be to develop an ability-performance discrepancy score system for standard tests of ability and achievement. Appropriate agencies might then identify the "significant others" of these students, as in (1) above, and work through them to modify educational behavior.

Needed Research

The heart of this paper is the section on the educational achievement process. Unfortunately, the research we have as a basis is less than ideal. The work already done can be improved by using multivariate analysis techniques with data already available. It is hoped that this can be done soon.

Although the data presented in table 1 were taken from reasonably well-conducted projects, we shall have to raise our research sights considerably in order to obtain the most useful data. Consider these facts. With one exception each of these studies takes a sample from but one area rather than from the country as a whole. Also in every case, the part of the life span covered is short; the longest is 7 years. By now most of the variables used can be validly and reliably measured, but there are great variations in the validity and reliability of the ones presented. Next there must be other important independent variables, some of which may develop during the course of the student's time in school, which should be measured. Finally, while the developmental scheme here presented is probably useful, it is not perfect. What is needed is a more systematic specification of the educational achievement variables operating at any one stage—perhaps even breaking down to year-to-year intervals rather than, or in addition to, gross stages. At least three educational achievement variables should be measured at all levels: grades, standardized achievement test scores, and school continuation. Ideally, all these facets should be built into at least one nationwide longitudinal research project beginning with the preschool child and ending with the adult.

Even better would be a series of such projects, each a few years apart. The aim of these would be to provide a constant flow of dependable information about the changing nature of the educational and occupational achievement process. In effect, this work would help guide investment decisions regarding the educational process and the flow of qualified manpower into the various levels of the occupational structure.

Summary

Occupational achievement is the process by which persons are selected into various levels of the occupational prestige hierarchy. The main mechanisms providing the selection are to be found in educational achievement. There are large differences among racial, regional, and residential categories in educational achievement. To some extent these are due to differences in the quality of educational facilities and personnel. Especially influential are the gaps between the rural South and Southwest and racial minority groups on the one hand, and all the rest of the population on the other hand. But it is clear that most of the variability among persons is not accounted for by these factors. A set of social psychological concepts was specified and was brought into a relation with one another in a hypothetical schema of stages of the educational achievement process. The data presented were reasonably consistent with the schema. The key independent variables are ability, socioeconomic status, and the influence of others, especially certain "significant others." Certain variables developed in the earlier process are thought to become independent variables later. One of the most important is one's conception of his ability to learn. Unfortunately, this variable was identified after all the research presented here was underway. Others are level of occupational aspiration, parental encouragement for college, and college plans. The concepts, the schema of stages, and the data lend themselves quite readily to inferences regarding ways of modifying individual patterns of educational achievement, and a few such suggestions were made. It is to be emphasized that definitive research on the educational achievement process must be conceived and executed on a much broader, deeper, and longer scale than has ever been done to date. When progress has been made on this problem these educational data might be linked, through measurements on particular persons, to occupational achievement data. An appropriate general conceptual scheme, perhaps expanding on the one presented herein, might provide a more comprehensive, yet detailed, view of the whole occupational achievement process than has yet been possible.

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Chapter 12

Interrelations Between the Farm Labor Force and Changes in the Total Economy

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The market for agricultural labor has important linkages to the nonfarm sector of the economy. The demand for agricultural labor is a derived demand—derived from the demand for agricultural products. As the relative demand for farm products shifts, so does the relative demand for farm labor, other things remaining constant. And if the demand for agricultural products expands at a slower rate than the demand for other products, so will the demand for farm labor expand at a lower rate than the demand for nonfarm labor, other things being equal. Such shifts are transmitted to the farm labor market through changes in the relative price of farm products.

The prices of other inputs used in farm production also affect the demand for labor. As the prices of other inputs change, the demand for labor shifts in the opposite direction. And if new, more productive inputs are introduced into the agricultural production function, the demand for labor will decline, other things being equal. Such changes are channeled into the farm labor market through the capital market, defined broadly so as to include all nonlabor inputs.

On the supply side, the agricultural labor market is linked to the nonfarm sector through the civilian labor force, the level of unemployment, and the price of labor in the nonfarm sector. Given an increase in the size of the civilian labor force, more labor will be supplied to agriculture, other things being equal. And given a rise in nonfarm incomes relative to farm incomes, less labor will be supplied to agriculture. Finally, given the secular shift of labor out of the farm sector, a rise in unemployment, which reflects fewer job opportunities, causes the labor flow to slow up, thereby increasing the supply of farm labor over what it would have been, and depressing farm wage rates.

The purpose of this paper is to examine these interrelations between the farm labor market and the nonfarm sector of the economy. This will be done principally through the use of an econometric model of the farm labor market, which contains the major linkages specified above.

The basic model is a six-equation demand-supply model which explains the levels of employment and labor returns for the three components of the agricultural labor force: hired labor, unpaid family labor, and operator labor. Linkages to the nonfarm sector of the economy are specified as exogenous variables.

The paper is organized in four parts. Background information which shows the major changes taking place in the farm labor market is provided in the first part. The second part presents an econometric model of the market for agricultural labor, and utilizes it, including estimates of its reduced form transformation, to analyze the impact of the general economy on the agricultural labor market. The third part summarizes the results from other studies which complement the findings from this basic model. A brief analysis of the impact of minimum wage legislation on the farm labor market is then made, and the paper ends with some concluding comments.

Background

Farm employment declined from 12.8 million in 1929 to 5.6 million in 1965. As a proportion of the labor force, it declined from 26 percent in 1929 to 9.7 percent in 1962 (table 1), and even further by 1966. Similarly, farm population as a percentage of total population declined from 25.1 percent in 1929 to 8.1 percent in 1962. The most rapid decline has occurred since World War II in both the farm labor force and farm population.

This decline in farm labor force has been almost continuous since 1929. It slowed somewhat during the Great Depression, and the labor force actually increased in a number of years. However, farm population tended to increase somewhat more during this interval, suggesting that many who returned to the farm in this period did not find employment.

The agricultural labor force can be broken down into three components: hired labor, unpaid family labor, and operator labor. Each of these components, measured in year-equivalents, has been declining over time (table 2). However, they have not been declining at the same rate. The most rapid decline has been in the unpaid family labor component, while the slowest decline has been in

TABLE 1.—*Changes in the farm labor force and farm population relative to changes in the civilian labor force and total population, 1929–61*

Year	Farm labor force	Civilian labor force	Farm labor force as percentage of civilian labor force	Farm population	Total population	Farm population as percentage of total population
	Thousands	*Thousands*	*Percent*	*Thousands*	*Thousands*	*Percent*
[illegible]	12,763	49,180	26.0	30,580	121,770	25.1
[illegible]	12,627	52,230	24.2	32,305	126,374	25.6
[illegible]	11,338	55,230	20.5	30,840	130,880	23.6
[illegible]	10,219	54,630	18.7	24,815	133,915	18.5
[illegible]	9,964	62,100	16.0	24,194	149,304	16.2
[illegible]	8,639	64,470	13.4	19,019	161,884	11.7
[illegible]	7,342	69,390	10.6	16,592	177,135	9.4
[illegible]	6,919	71,600	9.7	14,803	183,057	8.1

SOURCES: Farm Labor Force and Civilian Labor Force: See Appendix. Farm Population: *Farm Population Estimates for* [illegible]. USDA, ERS, No. 130, Oct. 1963 (table 1). Total Population: *Statistical Abstract of the U.S.* U.S. Department of Commerce, Bureau of the Census, 1965 (table 2).

the operator labor component. This would indicate: (1) that different forces affect the utilization and movement of the components of the agricultural labor force, and/or (2) that the same forces are having a different impact on the three components.

The price of agricultural labor, as measured by the agricultural wage rate, has been rising over time (table 3). In the period since 1935–39 it has risen both in relation to the price of agricultural products and in relation to the price of other inputs.

Additional data in table 4 help both in understanding the secular decline in agricultural employment, and in understanding, at least in part, the differences in rates of decline among the various components of the farm labor force. The table shows the disparity in labor incomes between the rural and urban sectors. Despite the fact that annual incomes have risen in both sectors, and a sizable shift in employment has taken place, the gap between the two sectors remains large.[3] Moreover, although each measure of labor income has been rising since 1930, it is clear that the returns to hired farm labor have lagged behind those of both family farmworkers and factory workers.

Farm people receive an important source of their income from nonfarm sources (table 5). Personal income of the farm population from nonfarm sources increased significantly from the 1930's to the 1940's. In absolute terms it has more or less plateaued since 1949.

On the other hand, personal income from nonfarm sources as a percentage of all sources was at

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[3] "Correction" of the data for such differences as cost of living, number of dependents, race, and sex would reduce this difference, but not eliminate it. See Ruttan (7). (Italic numbers in parentheses indicate references listed at the end of this paper.)

TABLE 2.—*Composition of the agricultural labor force for selected years, number, and indices*

[1929 = 100]

Year	Hired labor		Unpaid family labor [1]		Operator labor [2]		Total agricultural labor	
	Thousands	*Index*	*Thousands*	*Index*	*Thousands*	*Index*	*Thousands*	*Index*
[illegible]	3,391	100	3,523	100	6,518	100	13,432	100
[illegible]	3,190	94	2,761	78	6,546	100	12,497	93
[illegible]	2,679	79	1,950	55	6,350	97	10,979	82
[illegible]	2,329	69	1,949	55	5,648	87	9,922	74
[illegible]	1,952	58	1,293	37	4,097	63	7,342	55
[illegible]	1,604	47	1,034	29	3,472	53	6,110	46
[illegible]	1,484	44	751	21	3,374	52	5,609	42

SOURCES: *Farm Employment*, USDA, Statis. Bul. 334; *Farm Labor*, AMS, USDA; and *Farm Income Situation*, ERS, USDA, July 1965.

[1] Unpaid family labor = family labor — operator labor.

[2] Operator labor = number of farms.

TABLE 3.—*Index of prices received and prices paid for selected inputs, 1935–59*

Price index	1935–39	1940–44	1945–49	1950–54	1955–59
Prices received by farmers	100	144	231	252	221
Price of—					
Fertilizer	100	106	132	150	151
Machinery	100	102	130	173	191
Labor	100	178	333	395	455
Land (alone)	100	112	188	254	325
All costs	100	122	184	220	229

Source: Heady E. O., *Agricultural Policy Under Economic Development*. Iowa State University Press, Ames. 1962 (p. 61.)

its peak in 1934, probably in large part due to the relative decline in farm incomes. This percentage declined through 1944, but has been gradually rising since.

An important source of this nonfarm income of the farm work force is actually nonfarm employment. For example, in 1960, hired workers who did 25 days or more of farm wagework spent about 17 percent of their working days at nonfarmwork and received about 22 percent of their yearly earnings from nonfarmwork. The comparable figures for 1947 were 15 and 19 percent, respectively, (*10, table 6*), which indicates some trend in the direction of more off-farm work.

TABLE 4.—*Comparison of farm and nonfarm income for selected years, 1920–64*

(1920 = 100)

Year	Average annual farm income per family worker [1]		Average annual wage per employed factory worker [2]		Average annual wage per hired farmworker [3]	
	Current dollars	Percent	Current dollars	Percent	Current dollars	Percent
1920	$ 708	100	$1,353	100	$ 528	100
1930	487	69	1,196	88	369	70
1940	506	71	1,298	96	384	73
1950	1,693	239	3,033	224	1,207	229
1959	2,108	298	4,500	333	1,476	280
1964	2,872	406	5,354	396	1,688	320

Sources: *Farm Income Situation*, Econ. Res. Serv., USDA, July 1965; and *Farm Labor*, USDA.

[1] Net income of farm operators including government payments divided by the year equivalents of family farmworkers.

[2] Average weekly earnings of production workers or nonsupervisory employees in manufacturing, multiplied by 52.

[3] Expenses for hired farm labor including cash wages and value of perquisites divided by the number of hired farmworkers.

TABLE 5.—*Role of nonfarm income in the income of farmers for selected years, 1934–64*

Year	Personal income from farm sources [1]	Personal income from nonfarm sources [2]	Personal income from all sources	Personal income from nonfarm sources as percentage of all sources
	Millions	*Millions*	*Millions*	*Percent*
1934	$ 3,188	$ 2,186	$ 5,374	40.7
1939	4,751	2,610	7,361	35.5
1944	12,201	4,435	16,636	26.7
1949	13,284	6,192	19,476	31.8
1954	12,509	5,934	18,443	32.2
1959	11,009	7,050	18,059	39.0
1964	11,124	6,757	17,881	37.8

Source: *Farm Income Situation*, ERS, USDA, July 1965 (tables 1H, 4H, and 10H.)

[1] Gross farm income less production expenses less net income of nonresident operators plus wages, salaries, and other labor income of farm resident workers less contributions of farm resident operators and workers to social insurance.

[2] All income received by farm residents from nonfarm sources such as wages and salaries from nonfarm employment, nonfarm business and professional income, rents from nonfarm real estate, dividends, interest, royalties, unemployment compensation, and social security payments.

A similar trend is discernible when farm operators are considered. The percentage of farm operators reporting 100 or more days of off-farm work has risen from 23.3 percent in 1949 to 29.8 percent in 1959 (*11, p. 78*). Off-farm work is particularly important for farms where the value of farm products sold is less than $2,500; here the change was from 32.6 to 46.1 percent in the comparable period. In the case of other members of the farm operator's family, 21.6 percent of all farm operators reported other members of their families performed work off the farm in 1959, as compared to 15.9 percent in 1954 (*11, p. 81*).

Hence, employment conditions in the nonfarm sector exert a very direct influence on the farm labor force. Employment opportunities and rising wage rates can lead to higher income levels for farm people through their direct participation in the nonfarm labor market.

An Econometric Model of the Market for Agricultural Labor

Statistical estimates of the structural equations in the market for agricultural labor[2] are presented in table 6. The model assumes that the level of employment and price of labor for each component of the farm labor force are determined in a market which can be described by a demand-and-supply equation. These markets are assumed to be interdependent or jointly dependent. Hence the model is a six-equation simultaneous system.

Distributed lags have been introduced into each equation, on the assumption that demanders and suppliers of farm labor do not adjust immediately to changing economic conditions. This will permit the derivation of both long-run and short-run elasticities.

Time series data were used in fitting the model. (See appendix for sources and description of data.) The data were converted to logarithms for fitting, and hence the estimated coefficients provide direct estimates of the elasticities. Theil-Basmann estimating procedures were used to account for the simultaneity in the system. In each equation, identification conditions are fulfilled.

The following is an equation-by-equation discussion of the statistical results.[3] (Elasticities will be discussed below.)

The demand for hired labor

The demand for hired labor equation was formulated with three endogenous variables and three exogenous variables. The quantity of hired labor was postulated to be a function of the agricultural wage rates, Y_2; "real" farm prices,[4] X_7; a time trend, X_8; and the quantity of operator labor, Y_3. The last variable is included to determine to what extent labor switches back and forth between the hired and operator components.[5] Its basic assumption is that the greater the employment of operator labor, the less demand for hired labor. The lagged dependent variable is included to test the hypothesis of a distributed lag adjustment mechanism.

In the model, all coefficients have the expected signs, and all are significant at the 1-percent level with the exception of the coefficient for operator labor. The coefficient for this variable is greater than its standard error. The coefficient for the lagged variable is significantly different from both zero and one, which lends support to the distributed lag hypothesis.

The coefficient of multiple determination is .984 and the Durbin-Watson statistic is 1.801. Hence, we are not able to reject the null hypothesis of no serial correlation in the calculated residuals.

The supply of hired labor

The supply of hired labor equation was formulated with three endogenous variables and four exogenous variables. The quantity of hired labor supplied was postulated to be a function of the agricultural wage rate, Y_2; the expected compensation per employed worker[6] in the nonfarm sector, X_{16}; the size of the civilian labor force, X_5; a trend variable, X_8; the employment of unpaid family labor, Y_5; and the lagged dependent variable. The employment of unpaid family labor was again used to test for substitution effects among the components of the labor force, and here tested the hypothesis that an increase in the employment of unpaid family labor reduces the supply of hired labor. The lagged dependent variable again tests the distributed lag hypothesis.

All coefficients have the expected sign, and all are significantly different from zero at the 1-percent level. The coefficient of the lagged variable is significantly different from both zero and one, which supports the distributed lag hypothesis.

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[2] This model and a more extensive analysis of it are being published elsewhere. It is taken from Tyrchniewicz (*9*).

[3] The reader not interested in the statistical results can go directly to the next section without a serious loss of continuity.

[4] Because of the serious conceptual and statistical difficulties in measuring the prices of other inputs, especially when they are capital goods, a broad index of the price of nonlabor inputs is used and introduced into the model as a deflator of the prices received for farm products. In this way the effect of these price changes are accounted for, but in a rather aggregative way. This is the case in each of the demand equations.

[5] Unpaid family labor was also included in other formulations of the model, but did not appear with a significant coefficient.

[6] Given the way this variable is constructed, it measures the expected income to be received in the nonfarm sector on the assumption that if employed the migrant receives the average compensation in the nonfarm sector and if unemployed he receives zero income. The probability of being unemployed is assumed to be given by the rate of unemployment in the general economy.

TABLE 6.—*Simultaneous equations estimates of structural demand and supply relations for the three components of the farm labor force, 1929–61, regression coefficients, and standard errors*[1, 2]

Constant term	X_2	Lagged dependent variable	X_8	X_9	X_{10}	Y_1	Y_2	Y_3	Y_5	Y_6
Hired labor:										
Demand										
2.226	.310** (.085)	.866** (.113) $R^2 = .984$	−.044** (.014)	$d' = 1.800$				−.115 (.090)	−.261** (.061)	
Supply										
2.877		.582** (.087) $R^2 = .991$	−.085** (.014)	.764** (.132) $d' = 2.040$	−1.419** (.298)		−.218** (.072)		.849** (.207)	
Unpaid family labor:										
Demand										
4.130	.559** (.200)	.860** (.094) $R^2 = .959$	−.130* (.050)	$d' = 1.728$		−1.002* (.488)			−.820* (.391)	
Supply										
6.162		.551** (.194) $R^2 = .959$	−.103* (.052)	.287 (.492) $d' = 1.622$*	−1.466* (.755)	−.643* (.367)			.661* (.339)	
Operator labor:										
Demand										
.398	.066* (.033)	1.041** (.029) $R^2 = .999$	−.026** (.006)	$d' = .841$**		−.202** (.057)			−.069** (.026)	
Supply										
.736		.9936** (.045) $R^2 = .999$	−.003** (.008)	.023 (.009) $d' = .862$**	−.096** (.029)	−.110** (.041)				.005* (.002)

[1] A 1-asterisk superscript indicates the regression coefficient is statistically significant at the 5-percent level, a 2-asterisk superscript indicates statistical significance at the 1-percent level, and ⁺ indicates significance at the 10-percent level.

[2] d' is the Durbin-Watson statistic for serial correlation among the calculated residuals. The presence of positive serial correlation is indicated by a two-asterisk superscript. One asterisk indicates an inconclusive test, and no superscript indicates no serial correlation among the calculated residuals.

*Identification of variables**

The dependent variables are as follows:

Hired farm labor—USDA estimates, measured in year equivalents.

Unpaid family labor—USDA estimates of family labor minus the number of farms, measured in year equivalents.

Operator labor—USDA estimates of number of farms.

The independent variables are:

X_2 = the index of prices received by farmers for all products, deflated by the index of prices paid by farmers for items used in production, except labor.

X_8 = a trend variable (1929 = 1, 1930 = 2, etc.).

X_9 = the size of the civilian labor force.

X_{10} = nonfarm income per employed worker in the nonfarm sector, multiplied by the percent of the labor force employed and deflated by the consumer price index (an estimate of the "expected" average annual income for nonfarm employment).

Y_1 = employment, hired farm labor—year equivalents.

Y_2 = employment unpaid family labor—year equivalents.

Y_3 = employment, operator labor—year equivalents.

Y_5 = an index of composite wage rates in agriculture, deflated by the consumer price index.

Y_6 = net farm income to family labor per family worker, deflated by the consumer price index.

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* For more detail, see the appendix.

The coefficient of multiple determination is **.991** and the Durbin-Watson statistic is **2.64**. The latter indicates that the null hypothesis of no serial correlation in the calculated residuals cannot be rejected.

The demand for unpaid family labor

This equation was formulated with three endogenous variables and three exogenous variables. The quantity of hired labor demanded was postulated to be a function of the agricultural wage rate, Y_2, (a proxy for the "price" of unpaid family labor); "real" farm prices, X_2; a trend variable, X_9; the quantity of hired labor, Y_1; and the lagged dependent variable. The quantity of hired employment tests the hypothesis that an increase in the employment of hired labor reduces the demand for unpaid family labor. The lagged dependent variable tests the distributed lag hypothesis.

All of the coefficients have the expected sign, and all are significantly different from zero at the 5-percent level or better. Two coefficients are significantly different from zero at the 1-percent level. The coefficient of the lagged dependent variable is significantly different from both zero and one which lends support to the distributed lag hypothesis.

The coefficient of multiple determination is **.958**, and the Durbin-Watson statistic is **1.728**. The latter indicates that the null hypothesis of no serial correlation in the residuals cannot be rejected.

The supply of unpaid family labor

This equation is formulated with three endogenous variables and four exogenous variables. The quantity of unpaid family labor supplied is postulated to be a function of the agricultural wage rate, Y_2, (a proxy for the "price" of unpaid family labor); the expected compensation per employed worker in the nonfarm sector, X_{10}; the size of the civilian labor force, X_5, a trend variable; the lagged dependent variable; and the quantity of hired labor, Y_2. The last is the substitution variable, and tests the hypothesis that an increase in the demand for hired labor reduces the supply of unpaid family labor. The lagged dependent variable tests the distributed lag hypothesis.

All coefficients have the expected sign, and all except one are significantly different from zero at the 5-percent level. The coefficient for the lagged dependent variable is significantly different from both zero and one, which supports the distributed lag hypothesis. The coefficient for the civilian labor force has the expected sign, but is not significantly different from zero at usually accepted levels. Farm population had been used as an alternative to the civilian labor force in early estimates of the model, but in general resulted in poorer overall results.

The coefficient of multiple determination is **.959** and the Durbin-Watson statistic is **1.66**. The latter results in an inconclusive test for serial correlation in the calculated residuals.

The demand for operator labor

This equation was specified with three endogenous variables and three exogenous variables. The quantity of operator labor demanded was postulated to be a function of the agricultural wage rate, Y_2; "real" farm prices, X_2; a time trend, X_9; the quantity of hired employment, Y_1; and the lagged dependent variable. The quantity of hired employment tests for substitution effects among components and tests the hypothesis that an increase in the employment of hired labor reduces the demand for operator labor. The lagged dependent variable tests the distributed lag hypothesis.

The coefficients of all variables have the expected sign and are significantly different from zero at the 1-percent level. The coefficient of the lagged dependent variable is greater than one (although not significantly so) and significantly greater than zero at the 1-percent level. This implies a negative coefficient of adjustment, and suggests that there tends to be an overadjustment to changing economic conditions in the demand for operator labor. However, we have little confidence in this coefficient, because the Durbin-Watson statistic indicates serial correlation in the calculated residuals. This suggests that the coefficients of the lagged dependent variable might be badly biased.

Attempts were made to correct this problem both by differencing the variables and refitting, on the assumption that the error term was being generated by a first-order Markoff process with a ρ of one,[7] and by using the Durbin-Watson statistic as an estimate of the serial correlation, and introducing this into the model explicitly by an appropriate differencing.[8] Neither procedure improved the statistical results.

The coefficient of multiple determination is **.999**, but this may be biased upward because of the serial correlation in the residuals.

The supply of operator labor

This equation was specified with three endogenous variables and four exogenous variables. The quantity of operator labor supplied was postulated to be a function of net farm income to family labor per family worker, Y_4; the size of the civilian labor force, X_5; the expected compensation per employed worker in the nonfarm sector, X_{10}; a trend variable, X_9; the lagged dependent variable, and the quantity of hired labor, Y_1. The last is the substitution variable and tests the hypothesis that an increase in the employment of hired labor reduces the supply of operator labor. The lagged dependent variable tests the distributed lag model. And in this equation, net farm income was used as a measure of the price of labor.

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[7] See Fuller and Martin (*2*) for an explanation of why this may be a viable alternative.

[8] As suggested by Goldberger (*4, pp. 236–238, 243–244, and 245–246*).

All coefficients again have the expected signs and all except two are significant at the 1-percent level. One of these, the price of agricultural labor, is significant at the 5-percent level, and the other, the civilian labor force, is not significantly different from zero, although it does have the expected sign.

Problems arise again with the coefficient of the lagged dependent variable. The coefficient is again greater than one, which suggests a negative coefficient of adjustment. The calculated residuals are serially correlated, which indicates that the parameter estimates may be biased. Alternatives similar to those in the demand for operator labor equation were tried, but again to no avail.

The coefficient of multiple determination is again exceedingly high, .999, but this may be biased upward because of the serial correlation in the residuals.

The Impact of the Nonfarm Sector on the Agricultural Labor Market

As the models were formulated, there are basically four variables through which changes in the nonfarm sector are transmitted to the agricultural labor market. The statistical support for these hypothesized influences is quite good. The coefficient for real farm prices is significantly different from zero in each demand equation, and has the expected sign. Hence, shifts in the demand for farm products, other things remaining equal, will produce shifts in the demand for agricultural labor in the same direction. This is the only unambiguous way in which nonfarm influences affect the market for farm labor through the demand side, given the models proposed.

On the supply side, there are three variables postulated, although two of these are combined. The level of unemployment was used to correct the compensation received per nonfarmworkers, so that this variable is in a sense an expected value of what the laborer can expect to receive when he moves to the nonfarm sector. This variable also had significant coefficients in each of the three supply equations, and again with the expected sign. The coefficients indicate that increases in the expected nonfarm income lead to reductions in the quantity of labor supplied to agriculture, other things being equal.

The remaining nonfarm influence on the farm labor market is through the civilian labor force. This variable had a coefficient significantly different from zero only in the supply for hired labor equation, but it had the expected sign in all three supply equations. This suggests that increases in the civilian labor force, other things being equal, lead to increased supplies of labor to agriculture. The influence is not strong on the supply of unpaid family labor and the supply of operator labor, although alternative variables such as the farm population worked no better.

The remaining variables that may be reflecting nonfarm influences on the farm labor market are the trend variables. These are discussed in more detail in a later section.

The Structural Elasticities and Their Implications

The elasticities obtained from this model are summarized in table 7. Since the model was fit in logs, the estimated coefficients provide direct estimates of the elasticities. Both short-run and long-run elasticities are provided for the hired labor and unpaid family labor components. This distinction was not made for the operator labor model, since the coefficient of the lagged variable implies long-run elasticities that are opposite in sign from the short-run elasticities. The following discussion concentrates on the influence of the nonfarm variables on the farm labor market.

Expected nonfarm income

Expected nonfarm income was a strong variable in every supply equation. The short-run elasticity was greater than —1 for the hired and unpaid family labor components. This implies that a given increase in nonfarm income relative to farm wage rates would result in a proportionately larger decline in the quantity of labor supplied to agriculture, other things being equal. In addition, this elasticity was more than double that of agricultural wages for the hired and unpaid family labor markets. In the case of operator labor, the difference was much greater. This implies that members of the agricultural labor force are more responsive to changes in nonfarm income than to changes in returns to agricultural labor. Although part of this difference may be due to the fact that a wage rate concept is used in agriculture and an income concept is used for the nonfarm sector, the fact that the difference is even greater when income concepts are used in both sectors (operator labor supply) suggests that the differences are not simply the result of different measurement concepts.

If wage rates and incomes in the nonfarm sector continue to increase, the supply curves for the three types of farm labor will shift to the left. Since the comparable demand curves are generally more inelastic, these leftward shifts of the supply curves can have a sizable impact in raising labor incomes in agriculture.

Real farm prices

The short-run elasticity of quantity of farm labor demanded with respect to real farm prices was less than one. Hence, changes in real farm prices have less than proportional effects on the quantity of labor demanded, other things being equal.

TABLE 7.—*Elasticities of adjustment, short-run, and long-run elasticities*

Model	Elasticity of adjustment	Price of labor [1]		Real farm prices		Civilian labor force		Nonfarm income adjusted for unemployment		Substitution variable [2]	
		Short run	Long run	Short run	Long run	Short run	Long run	Short run	Long run	Short run	Long run
Hired labor:											
Demand	.53	−.261	−.492	.310	.585					[3]−.115	[3]−.217
Supply	.42	.649	1.545			.764	1.819	−1.419	−3.379	−.318	−.757
Unpaid family labor:											
Demand	.14	−.420	−3.000	.559	3.993					−1.063	−7.593
Supply	.45	.681	1.513			[3].237	.527	−1.466	−3.258	−.645	−1.433
Operator labor:											
Demand	(4)	−.069		.066						−.202	
Supply	(4)	.005				[3].023		−.086		−.199	

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[1] Farm wage rate in all equations except operator labor supply where net farm income to family labor per farm worker was used.

[2] For hired labor demand, quantity of operator labor; for hired labor supply, quantity of unpaid family labor; for all others, quantity of hired labor.

[3] Computed from coefficients not significant at the 5-percent level or better.

[4] Coefficients of lagged dependent variable greater than one, implying a negative elasticity of adjustment which is inconsistent with the distributed lag hypothesis. Consequently, long-run elasticities are not derived.

Civilian labor force

The response of quantity of labor supplied with respect to changes in the civilian labor force is inelastic in the short run for all three components. This indicates that increases in the civilian labor force, other things being equal, result in a less than proportional increase in the quantity of labor supplied to agriculture.

The trend variable

The trend variable appears to be an important shifter of both the demand for and supply of the three components of the agricultural labor force. The persistent negative coefficient on the trend variable indicates that whatever it is measuring is having a negative influence over time; that is, less labor is being demanded in and supplied to agriculture, other things being equal.

In the demand equation, the negative coefficient of the trend variable is consistent with the following interpretations: (1) the trend variable may be picking up the effects of technological change; (2) it could be reflecting changes in the quality of farm labor over time, especially since the educational level of the farm labor force has risen over time; and (3) it may be picking up the effects of a consistent measurement error in some of the variables. There is no sound basis for choosing among these alternatives.

In the supply equations, the persistent negative coefficient of the trend variable is also subject to a number of interpretations. (1) It may be measuring the effects of a stronger preference or taste for nonfarm employment, and not only because of differences in relative incomes, but also because of factors such as better working conditions, shorter hours, and more prestige. (2) It may be picking up aspects of industrialization that are not included in the wage and income variables, e.g., availability of jobs, improved transportation systems, and improved communications. (3) It may be measuring the effects of consistent measurement or specification errors in some of the variables. (4) And finally, it may be reflecting the effects of higher levels of schooling, which provide larger alternatives for the labor force, and raise the level of mobility. Again, we have no sound basis for choosing among these alternatives.

The distributed lag hypothesis

In general the statistical results tend to support the distributed lag hypothesis, except in the case of operator labor, where the coefficient of the lagged dependent variable is slightly, but not significantly, greater than one. All of the coefficients for the lagged variables were significantly different from zero at the 1-percent level. This implies that there is a lag in the response to economic stimuli by members of the agricultural labor force. Differences in response among the components are discussed in the next section.

Elasticities and Differences Among Components

In this section the economic implications of the elasticities obtained are discussed, together with some tentative analysis of the differences among the components of the agricultural labor force. Emphasis again is given to the variables that reflect the influence of the nonfarm sector of the economy on the farm labor market.

Coefficients of adjustment

The coefficients of adjustment ranged from .53 in the hired labor demand equation to .14 in the unpaid family labor demand equation. This means that in the demand for hired labor the long-run elasticities are slightly less than twice the short-run elasticities. The consequence of this is that it would take about 4 years to remove 95 percent of the initial disequilibrium if no further disequilibrating changes occurred. A coefficient of adjustment of .14 implies that the long-run elasticities are approximately seven times as great as the short-run elasticities in the demand function for unpaid family labor, and that it would take almost 20 years for the initial disequilibrium to work itself out, if no other changes took place.

The estimated coefficients of adjustment present an interesting pattern among the components of the agricultural labor force. For the purpose of this analysis it is assumed that the coefficient of adjustment for both the demand and supply of operator labor is zero, or near zero, since the coefficient of the lagged dependent variable was not significantly different from one.

On the demand side the coefficient of adjustment is largest for the hired labor market, about one-fourth as large in the unpaid family labor market, and essentially zero in the operator labor market. This is consistent with the hypothesis that the hired labor component is the marginal labor input in the production process, and hence is that one which farmers manipulate most readily. Also, it is the only farm labor input that receives a direct payment.

In a sense unpaid family labor is also a marginal component, but since it is directly attached to the farm and receives no direct payment it appears that the farmer does not respond to changes in economic variables in his use of this component as rapidly as he does for hired labor. As a demander of his own labor, he is least responsive to factors that influence its use.

On the supply side the coefficients of adjustment are approximately equal for hired and unpaid family labor. This similarity, in part, suggests that these two components have similar alternative opportunities, which is supported by the fact that the two components have similar demographic characteristics such as age and education. Both components appear to be responsive to changing economic conditions, in part perhaps due to the fact that they have a low average age. Operator labor, on the other hand, is older and has fewer alternative opportunities and a much stronger commitment to agriculture; consequently, the supply is much less responsive to economic stimuli.[9]

Response to farm wages or incomes

Short-run elasticities with respect to farm wage rates ranged from —.069 for operator labor to —.681 for unpaid family labor. This means that a 10-percent increase in farm wage rates would result in only a 0.7-percent decrease in the quantity of operator labor demanded, but a 6.8-percent decrease in the quantity of unpaid family labor demanded, other things being equal. Short-run supply elasticities with respect to farm wage rates range from a very low .005 for operator labor to .681 for unpaid family labor. The ranking is the same for both demand and supply elasticities. It is important to note that the largest component of the labor force (operator labor) has the lowest elasticities, while the smallest component (unpaid family labor) has the highest elasticities.

The long-run supply elasticities with respect to farm wage rates for both hired and unpaid family labor are equal to approximately 1.5, which is to be expected since hired and unpaid family labor are similar in demographic characteristics. The long-run demand elasticities are very diverse, being about —.5 for hired labor and —3.0 for unpaid family labor.

Nonfarm income

The supply elasticities with respect to this variable are again about the same for unpaid family and hired labor, both in the long run and the short run. For operator labor the short-run supply elasticity with respect to nonfarm income is considerably less. This again supports the conjecture that both hired and unpaid family labor have approximately the same alternatives, and are similar in demographic characteristics, while operator labor is more strongly committed to agriculture and hence not as responsive to changes in nonfarm income.[10]

Civilian labor force

The supply of hired labor appears to be the most responsive to changes in the size of the civilian labor force. The response is inelastic in the short run for all three components, but practically zero for operator labor. The fact that the agricultural labor force has been experiencing a secular decline almost throughout the period of the study is probably one of the reasons for the very low responsiveness of operator labor to the changes in the size of the civilian labor force, especially in view of the large additional commitments of resources needed to be a farm operator. The hired labor and unpaid family labor components are made up of laborers who transfer back and forth between the two sectors to a greater extent, and hence are more responsive to the changes in this variable. Hired labor is the most responsive.

The long-run response for hired labor is relatively large, 1.8. For the unpaid family labor component, however, the response is still only slightly larger than .5.

Analysis of the Reduced Forms

The reduced forms are the result of a transformation of the system of structural equations in such a way that each endogenous variable in the system is expressed as a function of all of the exogenous variables in the system. These equations are of interest in themselves, since they indicate how given changes in the exogenous variables actually work themselves out in the market—that is, how the demand and supply equations interacting actually transmit these changes into changes in the level of employment and wage rates or income.

In principle, these equations can be obtained in two ways. Given knowledge of the structure, the coefficients of the reduced form can be calculated from the coefficients of the structural equations, since they are nothing more than combinations of the latter coefficients. Alternatively, they can be estimated directly by the application of ordinary least squares, since each of the independent variables is hypothesized to be exogenous to the market being considered.

Researchers differ as to which is the most appropriate procedure to use, since in general they will not produce the same results. We have chosen to use the direct estimation route, partly because of the unwieldiness of calculated coefficients when a six-equation model is used, and partly because the coefficients obtained from using the biased structural parameters[11] would also tend to be biased. It should be recognized, however, that the reduced forms used in the following analysis are not directly consistent with the structural parameters presented above, although they are unbiased estimates of the direct effects of the exogenous variables on the endogenous variables. The results may be disturbed, however, from the high intercorrelation among the exogenous variables.

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[9] This analysis is consistent with Clawson's findings that the bulk of the change in the operator labor force has not come about by a transfer of farmers to the nonfarm sector, but rather by a decline in the rate of entry into farming. [See Clawson (*1*).]

[10] The low elasticities for both farm and nonfarm incomes in the operator labor component are consistent with Clawson's findings that most of the change in the farm operator labor force has come about by a decline in the rate of entry into farming (*1*).

[11] Coefficients obtained from the application of Theil-Basmann estimating procedures are biased, but they are consistent and relatively efficient.

Selected parameter estimates (elasticities) and their respective standard errors are presented in table 8. Only the coefficients from variables pertinent to our analysis are presented. The agricultural wage rate is used as the proxy for the price of both operator labor and unpaid family labor.

TABLE 8.—*Elasticities of estimated reduced form equations*

Dependent variable	Real farm prices	Civilian labor force	"Corrected" nonfarm income
Hired labor employment	.177 (.056)	.767 (.156)	−.364 (.069)
Unpaid family employment	.067 (.194)	−.335 (.541)	−.146 (.240)
Operator employment	−.003 (.022)	−.058 (.061)	−.035 (.027)
Farm wage rate	.356 (.146)	−.295 (.407)	1.521 (.180)

The three exogenous variables appear to have a relatively strong influence on the level of hired employment. Real farm prices and the civilian labor force are directly related, while nonfarm income is inversely related, with increases in nonfarm income reducing hired employment, other things being equal.

The exogenous variables do not appear to have affected the level of unpaid family employment when evaluated in this way. Real farm prices have a direct effect, civilian labor force has an inverse effect, and corrected nonfarm income also has a direct effect, if the coefficients are accepted despite their lack of statistical significance, and if it is recognized that these coefficients indicate the way in which demand and supply forces work themselves out in the market place.

Similar comments apply to the reduced form for operator labor. Here, however, real farm prices tend to have an inverse effect on operator employment, although the elasticity is very small and not significantly different from zero. The coefficient for the nonfarm income variable is greater than its standard error and negative, which suggests that this variable has had some influence in pulling operator labor out of agriculture.

For farm wage rates, a measure of the return to labor in agriculture, the results indicate a direct and significant influence from real farm prices and nonfarm income. The response from nonfarm income is relatively large. A 10-percent increase in this variable has historically led to a 15-percent increase in farm wage rates, other things being equal.

It should be recognized that unemployment is also accounted for in this variable. An increase in unemployment would lead to a decrease in the "corrected" nonfarm income, and hence lead to a decrease in agricultural wage rates, other things being equal. Similarly, the effect on the employment of each of the labor components would be to raise employment in agriculture, other things being equal.

An example of the magnitude of the effect of unemployment can be obtained by considering the data for 1950, a year that is near the midpoint of the data, and typical of the level of unemployment when the economy was performing rather sluggishly during the 1950's. Unemployment that year was estimated to be 5.3 percent of the labor force. Had it been lowered to 4.0 percent it would have raised the "corrected" nonfarm income by 1.3 percent, and in turn led to an agricultural wage rate some 2 percent higher than was obtained that year. This most likely understates the total effect of reducing the level of unemployment, for had the unemployment rate been kept at 4 percent, the pecuniary compensation in the nonfarm sector would probably have been even higher, with a further increase in the farm wage rate.

Similar analyses can be made on the levels of employment for each component. Given the estimated coefficients, the impact would have been greatest on the hired labor component, with the smallest effect on the stock of operator labor.

The negative coefficient for the civilian labor force variable indicates that increases in this variable, other things being equal, have led to lower agricultural wage rates. Although this is plausible, it should be remembered that this coefficient is not significantly different from zero.

In summary, it appears that two broad lines of assertion can be made from this analysis. First, the nonfarm variables considered appear to have their most important direct effect on the market for hired labor. This suggests one of three alternative hypotheses: (1) the hired farm labor force is more responsive than either operator labor or unpaid family labor to nonfarm influences on the labor market, (2) the structural elasticities in the other two equations are such that as the changes in exogenous variables work themselves out in the market for the other two components, they have a very small net effect, or (3) the intercorrelation among the exogenous variables in the reduced forms is disturbing the statistical results so that the estimated coefficients do not give a true measure of the net effect of these variables.

We suspect that it is a little bit of each one. With the exception of the civilian labor force variable, each nonfarm variable performed adequately in the structural equations. Their effect in the markets for operator and unpaid family labor did, however, tend to be smaller than their effects in the market for hired labor.

The second major assertion is that "corrected" nonfarm income appears to have a sizable effect on the farm labor market. The impact on hired employment is highly significant and in the expected direction. Its impact on the other two components is less, though still in the expected direction. Its impact on the farm wage rate is relatively large, and significant, however. We have seen that this effect is sizable for both unemployment and pecuniary compensation. The reason for this rather large effect is the relatively inelastic demand for farm labor. Even though the employment effects are not large, a small shift of the labor supply curve to the left leads to a substantial rise in the returns to labor.

A final comment on the real farm prices variable is also pertinent. The impact of this variable is relatively small, even though it is statistically significant in the reduced forms for both hired employment and farm wage rates. This suggests that raising farm prices through price supports does not lead to sizable increases in the returns to farm labor. On the other hand, the data do not suggest that the employment effect from this is very large.

Some Complementary Studies

The preceding analysis was based on a six-equation model of the market for agricultural labor. The model has certain limitations because of the kind of data used in fitting it and statistical problems encountered in estimation. These problems were basically threefold. First, despite various attempts to isolate the effects of technical change on the demand for agricultural labor, it was not possible to do so. Alternative measures of technical change were used, in addition to making it an endogenous variable within the system. All were to no avail, and hence our model tells us very little about this important variable.

In addition, various studies indicate that education has a significant effect on farm labor, both through increasing its productivity and through making it more employable in alternative employment. It was not feasible to introduce this into a time series analysis, however, because the data are limited, and had interpolations been made, the resulting variable would be subject to a rather slow secular change.

And finally, it was not possible to statistically separate the effects of unemployment and nonfarm incomes on the supply of labor. Hence, these two variables were combined into an "expected" or "corrected" nonfarm income, and it is difficult to know whether the resulting variable is measuring the effects of both, or just the effect of one of the components.

In order to extend the analysis, additional studies will be drawn on which utilize other kinds of data to examine the effect of these variables. It is not felt that the omission of these variables has seriously biased the results in our model, since both omitted variables have strong trends in them, and trend variables have been included in our models. This should reduce the specification bias. Moreover, the concept of "expected" income that was used for the nonfarm sector has a strong a priori base.

Education and the labor force

In many respects education can be viewed as a nonfarm influence on the agricultural labor market, even though the decision-making process and financing are at least partially in the hands of farm people. Its effect can be viewed largely as an exogenous variable in the labor market.

Gisser (*3*) has used cross-sectional data to examine the impact of education on farm outmigration and income. He estimated both demand and supply curves for agricultural labor, and included the level of schooling in both the demand and supply equations. His hypotheses were that schooling would have a positive impact on the demand for labor, other things being equal, because of the increased productivity of labor; while on the supply side, the effect would be negative since more education would provide the individual with a wider range of skills as well as make him more aware of alternative employment opportunities.

His statistical results were consistent with these hypothesized directions of influence in both equations. In addition, the reduced form coefficients, which indicate how these influences work themselves out in the market, indicated that increasing the level of schooling by 10 percent in rural areas would bring about a 6- to 7-percent increase in farm outmigration and a rise in the farm wage rate of 5 percent. These effects are fairly substantial.

Technology

To the extent that resources which provide research and extension services important to the raising of the level of technology in agriculture come from outside the sector, this also can be viewed as a nonfarm influence on the agricultural labor market. Much of the new technology is produced by a publicly financed system of agricultural colleges and by private industry.

Wallace and Hoover (*12*) studied this aspect of the labor market through an extension of the Gisser model. Also using cross-sectional data, they introduced expenditures on research and extension as an additional variable in the demand equation in an attempt to measure the effect of technical change.

They obtained a positive and statistically significant coefficient for the variable, indicating that the impact of technology was to increase the demand for farm labor, so long as product market effects were held constant. However, when they introduced a demand equation for agricultural products into the labor demand equation, they found that the effect of technical change, when product effects are considered, was negative so long as the demand for the product was inelastic. They do not evaluate the impact of this through the reduced forms.

Unemployment

We draw on three studies to substantiate the independent role of unemployment in the agricultural labor market. None of these are developed in a structural framework, but they do show rather clearly the effect that unemployment has on the supply of labor in agriculture.

The first study is by Hathaway (5) who examined the historical record of migration from agriculture. His data provide only crude estimates of the effect, but they are rather convincing. The rate of change in farm population due to migration was —19.3 percent in the decade of the 1920's, —12.7 percent in the decade of the 1930's, and —30.9 percent in the decade of the 1940's. The contrast between the 1930's and the 1940's is especially striking.

At a later date, Sjaastad (8) correlated migration series for various time periods with the percentage of unemployment of the civilian labor force. The aggregate unemployment rates were intended to be proxies for the unemployment levels prevailing in the occupations which off-farm migrants move into in large numbers. The correlations were all negative, and some were surprisingly high—particularly in view of the level of aggregation. The negative correlation suggests that migration rates from agriculture were suppressed by the unemployment, rather than the migration causing unemployment. If the latter had been the case, the correlation would have been positive.

A more recent study by Perkins and Hathaway (6) provides additional evidence. Using new data made available from a special sample of employment records from the Social Security Administration for the period 1955–59, they again show that unemployment tends to slow down the net rate of outmigration. Net migration is used advisedly here, for their study documents the rather high degree of back-migration into agriculture, a phenomenon which had not previously been recognized.

Minimum Wages and the Farm Labor Market

The structural elasticities presented earlier provide a means of evaluating the aggregate effects of minimum wage legislation. If the minimum wage is effective, and there are no serious imperfections in the labor market (within the sector), its effect will be to create unemployment. This will be done by reducing the quantity of labor demanded, and increasing the quantity of labor supplied.

The quantitative effects of this can be evaluated through the relevant "price" elasticities from the structural equations for hired labor, since the direct effects will be in this market. For example, a 10-percent rise in the wage rate would result, in the short run, in a 2.6-percent reduction in the quantity of labor demanded, and a 6.4-percent increase in the quantity supplied. This would lead to a rather sizable divergence between those wanting to supply their labor services to agriculture and the willingness of farm operators to employ them.

If one considers the long-run effects, the divergence will be substantially greater. After all adjustments had been made to the new situation, the quantity demanded would be reduced by 4.9-percent and the quantity supplied would increase by 15.4-percent. This could lead to serious problems of job rationing, and a tendency to sell the right to work if the law is in fact enforced.

Since the impact of the minimum wage legislation is likely to be greatest in the South, it is interesting to examine the effects directly in these regions. The relevant elasticities and effects of a 10-percent rise in wage rates are indicated in table 9. Once again the effects are rather substantial, especially in the long run. The effect on the quantity demanded tends not to be very large, but the increase in quantity supplied at these rates is quite large. If the minimum wage legislation is enforced, it can lead to considerable frustration on the part of those who will go looking for employment and will not be able to find it.

TABLE 9.—*Elasticities of farm wage rates and impact of a 10-percent increase in wage rates in three southern regions*

Region	Demand elasticity		Supply elasticity		Effect of 10 percent wage change on—			
					Quantity demanded		Quantity supplied	
	Short run	Long run	Short run	Long run	Short run	Long run	Short run	Long run
South Atlantic	−.145	−.289	−.405	1.558	−1.45	−2.89	4.05	15.58
East South Central	−.240	−.956	.562	2.342	−2.40	−9.56	5.62	23.42
West South Central	−.257	−.589	.491	3.507	−2.57	−5.89	4.91	35.07

Sources: Demand elasticities are taken from G. Edward Schuh and John R. Leeds. "A Regional Analysis of the Demand for Hired Agricultural Labor," *Papers and Proc. Regional Sci. Assoc.*, Vol. XI, 1963.

Supply elasticities are taken from Edward W. Tyrchniewicz and G. Edward Schuh. "Regional Supply of Hired Labor to Agriculture," *Jour. Farm Econ.* Vol. 48, No. 3, Pt. I, Aug. 1966.

Moreover, the effect of slowing down the necessary rate of outmigration can have serious long-run effects. It would appear that a more rational policy for solving the low income problems of farm people would be to invest in them in the form of additional training and schooling, so that they can obtain alternative employments, and so that those remaining will be more productive.

Some Concluding Comments

The combined studies reported here show that the nonfarm sector of the economy exerts its influence on the market for farm labor through at least the following six variables:

(1) *Real farm prices*—which reflect in part the shifting demand for agricultural products, and lead to direct shifts in the demand for agricultural labor.

(2) *The civilian labor force*—which tends to increase the supply of labor offered to agriculture, other things being equal.

(3) *Nonfarm pecuniary income*—which leads to inverse shifts in the supply of agricultural labor, other things being equal.

(4) *Unemployment*—which has a direct effect on the supply of labor offered to agriculture, other things being equal.

(5) *Technology*—which acts to reduce the demand for agricultural labor so long as product market effects are accounted for and the demand for agricultural products is price inelastic.

(6) *Education*—which increases the demand for agricultural labor as long as product market effects are ignored, and reduces the supply of labor offered.

If one is concerned with raising the levels of incomes in agriculture, a great deal can be said for the use of appropriate monetary and fiscal policies to maintain unemployment at a low level and the total economy growing rapidly. The supply of labor offered to agriculture appears to be responsive to "expected" nonfarm income, and increases in this, either through a reduction in unemployment or a rise in per capita pecuniary income in the nonfarm sector, lead to sizable shifts of the farm labor supply function to the left. Evaluated through the reduced forms, this leads to proportionately greater increases in farm wage rates, at the same time that nonfarm incomes are growing.

The results also indicate that education can play a major role in raising farm incomes. The effect of this is twofold. It speeds up the migration rate, so that the labor force goes to where it can be more effectively utilized. But in addition, it raises the productivity of the labor force remaining in agriculture, hence making the production of agricultural products possible with a smaller labor force.

The analysis on which this conclusion is based considered only formal education. We would hypothesize that the impact of informal schooling such as retraining and vocational training programs is not greatly different.

It would appear that the flow of technology to agriculture is creating low income problems. One means of correcting this would be, of course, to lower the rate of investment in the creation of new technology. This approach would have serious distributional effects, however. The reduction in research would likely lead to a slowing down in the growth rate of agricultural production. This would eventually lead to a rise in the relative price of food products. The resulting higher incomes to farm people would, therefore, come from a transfer from the consumer, and this would have very regressive income effects in the nonfarm sector. It would appear that the other policy alternatives are more palatable.

Farm incomes can also be raised, although not greatly, by price support programs which maintain or raise relative farm prices. This would have the same distributional effects as the slowing down of technical change, however.

These, in summary form, then, are the policy choices which evolve out of the analysis presented in this paper. They are not by any means exhaustive, but, within the relevant set, some would seem to be more rational than others. For example, policies which have other positive effects, such as maintaining full employment and a rapid rate of growth in the total economy, would appear to be more desirable than those which are either mere stopgaps or have negative effects, such as slowing down the investment in the creation of new knowledge or supporting agricultural prices to raise farm incomes.

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Appendix: Description of Data and Sources

Y_1 = employment of hired labor in agriculture, measured in year-equivalents. The USDA estimates are used, as published in the *Farm Labor* bulletin.

Y_2 = agricultural wage rates. The index of the composite wage rate as estimated by the USDA is used, with this being deflated by the consumer price index.

Y_3 = employment of unpaid family labor, measured in year equivalents. Obtained by subtracting the number of farms from the number of family workers as published in *Farm Labor*.

Y_4 = net farm income to family labor per family worker. Current operating expenses excluding hired labor, net rent to nonfarm landlords, and taxes in farm property were subtracted from gross farm income to give an estimate of total net income to farm factors of production. By charging off real and non-real estate capital items at their opportunity costs, a residual labor share was calculated. From this net farm income to total labor input, the expenditure for hired labor was subtracted out to obtain the net farm income to family labor. Dividing this by the number of family workers gives net farm income per family worker. The series was deflated by the consumer price index. (The basic data on the residual labor share are taken from "Regional Projections of Technological Change in American Agriculture to 1980," Gordon A. MacEachern, unpublished Ph.D. thesis, Purdue University.)

Y_5 = employment of operator labor. Estimated as the number of farms.

X_2 = "real" farm prices. The index of prices received by farmers deflated by the index of prices paid excluding labor.

X_5 = civilian labor force, as published in the *Statistical Abstract of the United States*.

X_{10} = expected nonfarm income per full-time nonfarm equivalent employee. The total compensation to farm employees (*Farm Income Situation*) is subtracted from total compensation of all employees (*Statistical Abstract of the U.S.*) to obtain total compensation to nonfarm employees. From the number of full-time equivalent employees (*National Income*, 1954; *U.S. Income & Output*, 1958; and *Survey of Current Business*, July 1962) the full-time equivalents on farms (hired farmworkers) are netted out to obtain the number of full-time nonfarm equivalent employees. This latter number is divided into the total compensation of nonfarm employees to obtain average annual nonfarm compensation per full-time equivalent employee, which is deflated by the consumer price index to put it into real terms. This is then multiplied by the percent of the labor force employed to produce an expected nonfarm income.

ACKNOWLEDGMENTS

I have benefited from comments by Vernon W. Ruttan and Joseph Havlicek, Jr., on an earlier draft of this paper.

Chapter 13

Occupational Mobility and Migration From Agriculture

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Introduction

This report concentrates on certain aspects of the problems of low income persons in rural areas. It is primarily concerned with the experience of these persons as they find nonfarm employment, either in conjunction with their ongoing farm employment or as they leave farm employment entirely.[1] Low income persons in agriculture are a disproportionate portion of the rural population. Prospects are dim that most of these low income persons in agriculture can significantly improve their income levels in farm employment. Therefore, this report examines the experience of farm-employed persons who change to nonfarm occupations.

The data used in the study are unique in that they also show an examination of the income and employment experience of a specified group of individuals through time. Certain data used in this study were derived from information furnished by the Social Security Administration. The authors did not at any time have access to nor did they receive any information relating to specific individuals or reporting units. The computations were done by the Department of Commerce and made available to the authors.

The basic sample comes from the 1-percent sample of Continuous Work History maintained for administrative purposes by the Social Security Administration. From this sample each individual who had covered farm employment in any year from 1957 through 1963 was selected. On those individuals information was tabulated for each year regarding their income and employment status. In addition, certain outside information regarding the areas in which the individuals lived in each year of covered employment was fed into the computations, primarily from 1960 census data and material derived therefrom.

Thus, for the same individuals we had available continuous information on covered earnings, industry of employment, location of employment, and the characteristics of the originating or receiving areas of employment. Whereas earlier studies had been confined to measuring occupational mobility relative to individual characteristics, these data made possible the examination of both occupational mobility and migration; moreover, both could be related to selected characteristics of the communities involved as well as to the individual's characteristics.

The unique advantages of such continuous register data are partially offset by some disadvantages.[2] Since the data are collected for Social Security purposes, certain individual characteristics, notably education, are not available for the persons in the sample. In addition, certain regulations relating to the coverage of agricultural employment results in less than full coverage of many persons who are often considered as farm employed. Moreover, among the lowest income farm operators who are covered, the income-reporting options make the exact income level difficult to determine. While these features represent considerable handicaps when dealing with low income persons in farming, it was felt that they were more than offset by the positive aspects of the data.

Certain terminology is specific to this study and therefore needs to be understood in order to completely understand the analysis which follows. The work focuses upon mobility and migration. *Mobility* is defined as moving from some form of farm employment coverage to exclusively nonfarm employment. *Migration* is defined as a change in location of employment, the smallest change being from one county to another.

Employment status is defined as either farm or nonfarm. Within the farm employment classification are those who are exclusively farm wage workers, those who are exclusively self-employed farm operators, and those who combine one of these categories with some form of nonfarm employment. Nonfarm employment was divided into nonfarm wage and salary workers and nonfarm self-employment.[3]

This classification and many other decisions regarding the analysis were made on the basis of the authors' previous experience on similar research using some of the same data (*4, 6*).

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[1] See appendix A for an exact definition of the terms used throughout the study.

[2] For a discussion of the nature of the Social Security sample and its comparability with other data relating to farm employment see Hathaway and Waldo (*4*). (Italic numbers in parentheses indicate references listed at the end of this paper.)

[3] The specific combinations of classifications making up each category are found in appendix A.

As a first step, the proportion of farm-employed persons in a given year who changed to exclusively nonfarm employment in the following year were compared by the characteristics of such individuals and of their county of farm employment. This proportion is referred to as the off-farm mobility rate and is expressed as a percentage. These rates were computed for each of the six consecutive 2-year periods within the years 1957-63, and for five regions of the continental United States, excluding Alaska. It was anticipated that mobility rates might differ among periods in response to changes in the level of unemployment in the economy.[4] In fact these differences were relatively minor and not consistent, mainly because the unemployment rate was high in all years except 1957. Accordingly, the rates reported here are weighted averages of the six mobility periods.

The overall rate of off-farm mobility averaged about 14 percent per year for the nation. Off-farm mobility rates for particular characteristics of individuals varied about this level. In interpreting these rates it should be recognized that they refer to *gross* changes in *employment*. Since a very high proportion of farm-nonfarm movers returned to farm employment in subsequent years, the net rate of decline in the farm labor force is very much lower.

Demographic Factors

An individual's sex, race, and age often have a considerable influence on his incentives and willingness to change jobs, and are commonly associated with factors such as formal education and skills which determine his earning power in different occupations. Table 1 shows the estimated off-farm mobility rates by sex, race, and age, by region.

Females are usually less dependent on their job earnings, more likely to take temporary employment, and therefore would be expected to have higher off-farm mobility rates than males. This was the case in all regions except the South.

Negroes in several studies have been shown to have higher mobility rates than non-Negroes. In this analysis the off-farm mobility rate of Negroes was substantially higher in all regions except the South, where the racial differences were small and because three-quarters of all farm-employed Negroes were located in the South, national differences between the race groups were relatively small also. The important question which arises is whether this difference was due to race or to other factors with which race was closely associated.

The well-established relation between age and mobility was confirmed in this study. The difficulties of obtaining and holding a new job and of adjusting to new employment increase with age, while the number of years over which an individual might benefit from job change decline with age. In every region, persons in any age class had higher mobility rates than persons in the next oldest age class. About one-third of the persons under 25 years moved out of agriculture each year, whereas the rate for those 25 to 34 years old was about 18 percent, for those 35 to 44 years old it was nearly 14 percent, and for those over 44 it was less than 8 percent. These wide differences in mobility rates partly reflected differences in the distribution by farm occupation of each age class. Mobility rate differences among age classes varied regionally (mainly because of regional variation in the proportion of farm operators and farm wage workers) (5).

Farm Employment Status

Five classes of farm employment were distinguished:

(a) Farm wage work only.

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[4] For a discussion of the impact of recessions on mobility out of agriculture see (*6*).

TABLE 1.—*Gross off-farm mobility rates by demographic characteristics, and by region* [1]

Characteristic	Northeast	North Central	South	Plains	West	Nation [2]
Sex:						
Male	19.5	11.1	13.5	13.0	19.5	14.0
Female	23.6	13.3	11.2	14.7	20.4	15.6
Race:						
Non-Negro	19.4	11.2	13.0	13.0	19.5	14.0
Negro	27.5	21.6	14.1	19.5	26.1	16.5
Age:						
Under 25	38.1	35.5	29.3	34.5	35.3	34.3
25–34	23.5	14.5	18.9	17.0	23.9	18.5
35–44	17.2	10.7	14.1	12.1	19.2	13.5
45 and over	10.9	6.1	7.9	6.9	10.5	7.6
Total	20.0	11.3	13.2	13.2	19.6	14.2

[1] Based on Social Security data. The off-farm mobility rate is the proportion of farm-employed individuals in a given year who in the following year were employed exclusively in nonfarm jobs. Pairs of consecutive years were identified as mobility periods. The rates in this table are weighted averages of the rates corresponding to each of the six mobility periods in the years 1957 to 1963.

[2] The continental United States, excluding Alaska.

(b) Farm self-employment only.

(c) Farm wage work and nonfarm employment.

(d) Farm self-employment and nonfarm wage employment.

(e) Farm self-employment and nonfarm self-employment.

Previous research by the authors provided some evidence for the hypothesis that farm wage workers (by virtue of lacking farm business assets and having fewer ties to the community) are more mobile than farm operators (*6*). The same study showed that multiple-job holding was primarily a stage in the off-farm mobility process rather than an alternative to off-farm mobility. Multiple-job holders were therefore expected to be more mobile than single-job holders because of their experience in and better knowlege of nonfarm jobs. However, multiple-job farm operators who had nonfarm self-employment were thought to be more able to combine farmwork and nonfarmwork, and consequently less likely to leave farming than those who had nonfarm wage jobs. Without exception these hypotheses were supported by the data on simple off-farm mobility rates (table 2).

The variation in off-farm mobility by farm employment status was extremely wide. For the nation as a whole, close to one-half of the multiple-job wage workers changed to exclusively nonfarm employment each year, whereas single-job operators had a mobility rate of less than 2 percent. The mobility rates for single-job wage workers, for farm operators with nonfarm self-employment, and for operators with nonfarm wage jobs only, were about 10 percent, 19 percent, and 16 percent, respectively. The very high rates for multiple-job farm wage workers are accounted for by the highly unstable pattern of employment which is typical of such individuals. Included in this class are seasonal, casual, and migrant workers, and others who have little commitment to either farm or nonfarm employment.

Earnings While Farm Employed

The total earnings of the farm employed might be expected to be indicative of their incentives to move out of agriculture. Persons with low earnings while farm employed seem to have more inducement to seek other employment than those with high earnings. However, if the earnings of the farm employed reflected their earning capacity in other jobs, no relation between this factor and off-farm mobility would be found. Consistent with previous research, no relation between earnings and mobility actually was found (*6*) (table 2). Moreover, evidence presented in later sections suggests strongly that earnings while farm employed are indicative of the individual's future stability of employment and earning capacity.

Local Farm Job Opportunities

Two measures of local opportunities for farm jobs were used: The median family income and the percentage of commercial farms in the county of farm employment.[5] It was supposed that individuals in

TABLE 2.—*Gross off-farm mobility rates, by farm employment status and earnings, and by region* [1]

Employment status and earnings	Northeast	North Central	South	Plains	West	Nation [2]
Farm employment status:						
Farm wage work only	12.2	11.0	7.8	9.7	8.7	9.5
Farm self-employment only	2.3	1.6	2.3	1.6	2.0	1.8
Farm wage work and nonfarm job	50.4	52.2	43.6	47.5	44.4	47.3
Farm self-employment and nonfarm wage job	21.0	19.3	22.1	16.0	20.4	19.3
Farm self-employment and nonfarm self-employment	15.9	16.5	18.9	14.2	15.1	16.4
Total	20.0	11.3	13.2	13.2	19.6	14.2
Total earnings while farm employed:						
Under $500	25.9	20.6	14.2	21.6	20.8	19.3
$500–$999	24.1	12.4	11.4	15.3	23.4	15.3
$1,000–$1,999	17.5	8.6	11.6	11.0	19.6	11.9
$2,000–$2,999	17.1	10.1	16.5	13.1	19.4	13.9
$3,000–$3,999	17.7	11.5	15.7	11.4	18.1	13.7
$4,000–$4,999	18.0	12.5	17.1	12.2	15.2	14.0
$5,000–$7,499	25.1	14.2	19.8	11.7	22.7	16.1
Over $7,499	13.1	8.5	13.6	5.4	10.5	8.6
Total	20.0	11.3	13.2	13.2	19.6	14.2

[1], [2] See footnotes 1 and 2, table 1.

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[5] Data on median family income and percent commercial farms by county was obtained from the 1960 census. Counties were classified by median family income according to whether they were under $3,500 or $3,500 and over; in the Northeast and West regions, few counties had median family incomes below $3,500. Commercial farms were defined as farms with sales of $10,000 and over. Counties were classified into three classes based on percent commercial farms: Less than 10 percent, 10 to 29.9 percent, and 30 percent or greater. In the Northeast and West regions relatively few counties had less than 10 percent commercial farms.

counties where the proportion of commercial farms was high would be less likely to move out of farm employment because the job opportunities and returns in agriculture would be relatively high. Similarly, to the extent that farm and nonfarm family incomes were correlated, persons in counties with high median family incomes could be expected to exhibit lower off-farm mobility rates. In fact, the reverse was true (table 3). Off-farm mobility rates were *lower* in counties where family incomes were low and, with the exception of the Western regions, *lower* in counties with the least commercialized agriculture. This unexpected result can be explained partly by the fact that counties with a large proportion of commercial farms would employ more farm wage workers, and, as already noted, such individuals are particularly mobile. But this evidence does not indicate that the labor market operates so as to move people more rapidly out of low income farm areas and thus to reduce the disparities in incomes within agriculture.

Occupational Mobility from Agriculture

Simple Off-Farm Mobility Rates

It is generally agreed that the decline in the size of the farm labor force has helped to prevent income problems in agriculture from worsening. Moreover, it is argued by many that mobility of labor from farm to nonfarm jobs can be relied upon to raise the incomes of farm-employed persons relative to persons in other occupations, and to raise the incomes of the poor in agriculture relative to the more prosperous farmworkers. Previous research has shown that the chances of an individual moving out of agriculture vary greatly according to his personal characteristics and the characteristics of his local community (*1, 2, 6, 7*). It is therefore crucial, as a check on the argument that income problems can be solved by the unassisted operation of the labor market, as well as for the purpose of implementing policies to facilitate mobility out of agriculture, to examine the relationship of demographic and economic characteristics to the rate of off-farm movement.

Proximity to employment centers

It seems reasonable to expect that the proximity of an individual's farm employment to a major nonfarm labor market affects the ease with which he can obtain a nonfarm job. But whether mobility and proximity should be expected to be linearly related is less clear (*3*).

In this study, Standard Metropolitan Statistical Areas (SMSA's) were identified as the major nonfarm labor centers.[6] Farm employed persons were classified according to whether they were located within 50 miles of an SMSA, 51 to 100 miles from an SMSA, 101 to 150 miles, or over 150 miles from an SMSA. The estimated off-farm mobility rates for each of these classes is shown in table 3. For the nation as a whole, the rates were highest for individuals closest to an SMSA, but it is also apparent that off-farm mobility is not a simple function of distance from major labor markets. In the Northeast off-farm mobility rates were highest in counties most distant from an SMSA, while in the North Central and West regions off-farm mobility rates in counties closest to, and in counties furthest from, SMSAs were about the same.

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[6] An SMSA is a census definition for counties which include cities with a population of 50,000 or more.

TABLE 3.—*Gross off-farm mobility rates, by median family income, percent commercial farms, and proximity to employment centers in the county of origin, and by region* [1]

Family income, commercial farms, and proximity to employment centers	Northeast	North Central	South	Plains	West	Nation [2]
Median family income:						
Under $3,500	13.8	8.0	10.9	9.9	.....	10.3
$3,500 and over	19.9	11.5	16.7	13.8	19.6	15.1
Percent commercial farms [3]:						
0.0– 9.9	19.6	11.9	11.9	14.9	30.5	12.3
10.0–29.9	18.5	12.6	13.6	11.4	21.8	13.8
30.0 and over	20.7	9.6	17.5	13.8	19.0	14.8
Proximity [4]:						
0– 50 miles	20.9	13.2	15.1	15.8	20.4	16.5
51–100 miles	16.0	9.5	12.1	11.4	17.2	11.8
101–150 miles	16.5	9.2	11.9	11.9	20.4	12.3
Over 150 miles	24.3	13.3	.....	12.9	19.5	14.4
Total	20.0	11.3	13.2	13.2	19.6	14.2

[1] See footnote 1, table 1.
[2] The continental United States, excluding Alaska.
[3] Commercial farms were defined as farms with sales of $10,000 and over.
[4] Proximity to an employment center was measured as the distance of the county of farm employment from the nearest SMSA.

Adjusted Differences in Off-Farm Mobility Rates

As already noted, the apparent influence of a characteristic of an individual or of his county of employment on his off-farm mobility rate could have resulted from association between his characteristic and some other. For example, is the high mobility rate observed among farm wage workers associated with farm occupation, or due to the distribution of farm occupations among age classes, race groups, and counties differing with respect to local farm and nonfarm opportunities.

A multiple regression analysis was used to determine the influence on mobility rates of each attribute net of the effects of other attributes. The variables included in this analysis were age, farm employment status, proximity to employment centers, and an index of rurality; all were expressed as discrete variables, in part because employment status is not a continuous variable and because the other mobility relationships were expected to be nonlinear.[7] Though individuals from low income farm areas had not appeared to have higher mobility rates than those from more prosperous farm areas, it was thought that this factor in combination with a measure of the rurality of the area might be significant. This combination, referred to as the *index of rurality*, was defined to form four classes of counties:

(1) Median family income $3,000 or over *and* under 81 percent of the population rural.

(2) Median family income $3,000 or over *and* 81 percent or more of the population rural.

(3) Median family income under $3,000 *and* under 81 percent of the population rural.

(4) Median family income under $3,000 *and* 81 percent or more of the population rural.

Counties in class (4) would broadly correspond to the low income, most rural areas, while those in class (1) would represent the most prosperous and urbanized farm areas. On the basis of previous analyses, sex, earnings while farm employed, and the percentage of commercial farms were not considered sufficiently important for inclusion. With one exception, the regressions were run only at the national level.[8] A special analysis was made of the South, which was thought to differ from other regions in several respects. Race was considered only in this region because most farm-employed Negroes are in the South.

An earlier study by the authors showed that a high rate of national unemployment was the most important single impediment to mobility out of agriculture (*6*). The national level of unemployment during the years covered by this study varied as follows:

	Percent		*Percent*
1957	4.3	1961	6.7
1958	6.8	1962	5.5
1959	5.5	1963	5.7
1960	5.5		

In the mobility periods 1957–58 and 1960–61 the unemployment rate rose, in the mobility periods 1958–59 and 1961–62 the unemployment rate fell, while in the periods 1959–60 and 1962–63 no appreciable change in the level of unemployment occurred. Denoting each of the pairs of mobility periods "recession," "recovery," and "stability," respectively, separate regression analyses were run on the pooled data for each pair of periods to examine further the effects of unemployment on off-farm mobility. However, the relatively high level of unemployment prevalent in all years except 1957 was reflected in few pronounced differences in mobility relationships among periods.

Farm employment status proved to be the major determinant of off-farm mobility rates (table 4). The effect of farm occupation, net of the influence of other factors, was only slightly less marked than in the comparison of simple mobility rates. Farm wage workers had mobility rates which significantly exceeded the mobility rates of farm operators, both between single-job holders and between multiple-job holders, in all periods.[9] These results strongly suggest that ownership of farm assets by farmers serves to reduce their mobility out of agriculture. Whether asset ownership might hinder mobility because of the prospect of capital losses or because of the prospect of foregoing future capital gains, is less than clear.

Adjusted mobility rate differentials between multiple- and single-job holders were consistently significant, both among farm wage workers and farm operators (table 4). The evidence confirms previous findings that multiple-job holding greatly facilitates complete farm to nonfarm mobility. No uniform differences were apparent between the mobility rates of those multiple-job farm operators who had nonfarm self-employment and those who did not, although the latter had significantly higher rates in 1959–60 and 1962–63.

The influence of age on mobility was much reduced but still important when the relationship was adjusted for the effect of other factors (table 5). Young persons, after allowing for their higher incidence in farm wage work and multiple-job holding, had off-farm mobility rates which were significantly

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[7] See appendix B for details of the multiple regression analysis of off-farm mobility rates.

[8] Regional differences in the determinants of off-farm mobility rates were examined in (*5*). Since that study found only minor regional differences in the determinants of mobility, and since regional analysis would have presented problems of inadequate sample size, the main regression analysis was conducted at the national level and not by region.

[9] It is noteworthy that the evidence with regard to differences between the single-job holders is even stronger than in the previous study undertaken by the authors, which showed the mobility rate of single job wage workers to be significantly higher than that of single-job operators in only one out of four periods. See (*6*).

TABLE 4.—*Net differences in off-farm mobility rates among farm employment status groups, the nation, 1957–63* [1]

Off-farm mobility period[2]	Amount by which the mobility rate of farm wage workers exceeded that of farm operators		
		Multiple-job wage workers over—	
	Single-job holders	Farm operators with nonfarm wage jobs	Farm operators with nonfarm self-employment
Recession, 1957–58 and 1960–61	5.9**	26.0**	24.1**
Recovery, 1958–59 and 1961–62	7.4**	24.8**	24.4**
Stability, 1959–60 and 1962–63	5.2**	24.8**	30.2**

	Amount by which the mobility rate of multiple-job holders exceeded that of single-job holders		
	Farm wage workers	Farm operators with nonfarm wage jobs	Farm operators with nonfarm self-employment
		Over single-job farm operators	
Recession, 1957–58 and 1960–61	33.8**	13.8**	15.6**
Recovery, 1958–59 and 1961–62	34.4**	17.0**	17.4**
Stability, 1959–60 and 1962–63	37.5**	17.9**	12.6**

[1] Estimated from Social Security data. The estimates were derived from multiple regressions used to adjust the simple off-farm rates for the influence of age, proximity to employment centers, and the rurality of the county of farm employment.

[2] Mobility periods were differentiated into recession, recovery, and stability according to whether the national unemployment rate was rising, falling, or virtually unchanged.

** Statistically significant at the .01 level as measured by a one-tailed t test.

TABLE 5.—*Net differences in off-farm mobility rates between age classes, the nation, 1957–63* [1]

Off-farm mobility period [2]	Amount by which the mobility rate of an age class exceeded that of older age class		
	Under 25 over 25–34	25–34 over 35–44	35–44 over 45 and older
Recession, 1957–58 and 1960–61	5.1**	2.0	3.6*
Recovery, 1958–59 and 1961–62	5.0**	3.4*	0.8
Stability, 1959–60 and 1962–63	6.0**	3.8**	2.0

[1] Estimated from Social Security data. The estimates were derived from multiple regressions used to adjust the simple off-farm mobility rates for the influence of farm employment status, proximity to employment centers, and the rurality of the county of farm employment.

[2] Mobility periods were differentiated into recession, recovery, and stability according to whether the national unemployment rate was rising, falling, or virtually unchanged.

** Statistically significant at the .01 level (*.05 level) as measured by a one-tailed t test.

higher than the rates for older workers, but the differences were much less than between the unadjusted rates. Workers under 25 years old, for example, had simple mobility rates 27 percentage points higher than the rates of those over 44 years old, but only about 11 percentage points higher after adjusting for other factors. In general, differences between successive age classes declined with age. It is clear that the probability of moving out of agriculture declines rapidly with age.

Differences in adjusted mobility rates between individuals who were close to major labor markets and those who were not were minor. The net mobility rates of individuals within 50 miles of an SMSA was uniformly higher, but not significantly so. It would appear that mobility differences associated with location were largely, but not entirely, due to the greater concentration of farm wage workers around SMSA counties.[10]

Contrary to the initial hypothesis, the most rural low income counties did not exhibit greater off-farm mobility than other areas. In fact, in the recession periods 1957–58 and 1960–61 individuals in these counties had significantly lower mobility rates than those in the more prosperous and urbanized communities. Thus, not only did the normal operation of the labor market fail to result in a more rapid rate of adjustment in low income rural areas, but also the rate of decline in the farm labor force in such areas appears to have been reduced more by recessions.

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[10] Data from the 1960 census indicate that the ratio of farmers and managers to farm laborers averaged about 3:1 in SMSA counties but about 4:1 in counties more distant from the center.

At the national level the impact of recession was apparent also in the mobility rates of farm employed persons who had nonfarm wage jobs. Their response to unemployment conditions was greater than that of other farmworkers, presumably because they were better informed about nonfarm job opportunities. Business cycle effects were not evident in mobility rate differentials among age groups. There was some indication that the mobility of those located within 50 miles of an SMSA was less seriously reduced in recession periods.

Two sets of regression equations were fitted for the South, one pertaining to farm operators and the other to farm wage workers.[11] Both analyses confirmed the findings at the national level with regard to the effect of multiple-job holding, age, proximity to employment centers, and rurality on mobility. Indeed, among farm wage workers, proximity proved to confer a significant mobility advantage in both recession and recovery periods. Among farm operators, location in predominantly rural areas tended to reduce mobility, and significantly so in recession periods.

The mobility rate of Negro farm wage workers, net of the influence of other mobility determinants, was significantly *lower* than that of other farm wage workers in all periods (table 6). Moreover, the lower mobility rate among Negroes was most marked in recession periods. It is difficult to explain this phenomenon except in terms of a discrimination in labor markets against Negroes which increases during periods of high unemployment. The apparently opposite finding in the analysis of unadjusted mobility rates is due to higher proportion of farm wage workers and young persons among Negroes.

TABLE 6.—*Net difference in off-farm mobility rates between Negro and non-Negro farm wage workers, the South, 1957–63* [1]

Off-farm mobility period [2]	Amount by which the mobility rate of Non-Negroes exceeded that of Negroes
Recession, 1957–58 and 1960–61	7.8**
Recovery, 1958–59 and 1961–62	5.4**
Stability, 1959–60 and 1962–63	5.9**

[1] Estimated from Social Security data. The estimates were derived from multiple regressions used to adjust the simple off-farm mobility rates of farm wage workers for the influence of multiple-job status, age, proximity to employment centers, and the rurality of the county of farm employment.

[2] Mobility periods were differentiated into recession, recovery, and stability according to whether the national unemployment rate was rising, falling, or virtually unchanged.

** Statistically significant at the .01 level as measured by a one-tailed t test.

Summary

This analysis has demonstrated the need to examine net relationships to determine the influence on mobility of the characteristics of individuals or of their community. On this basis, it is evident that the probability of off-farm mobility is highest for young, multiple-job farm wage workers located in counties within 50 miles of an SMSA. Further, it is clear that off-farm mobility rates are not higher in low income rural areas, and that in recession periods it is actually more difficult for individuals in such areas to obtain nonfarm jobs. In the South, single-job wage workers who are Negroes and work on farms over 50 miles from an SMSA have a much lower probability of moving out of agriculture than do multiple-job wage workers who are not Negroes and work close to an SMSA.

In-Farm Mobility Rates

Traditional sources of data on farm employment have provided information only on net changes in employment. Previous research using Social Security data has shown that net changes in the size of the farm labor force result from large gross movements into as well as out of farm employment (*6*). During the years 1957 to 1963 the number of in-farm movers averaged close to 90 percent of the number of off-farm movers. Moreover, it has been established that in-farm movers predominantly are persons who had formerly been employed in agriculture, but who on leaving the industry had failed to establish themselves in nonfarm jobs, and had moved back into farm employment (*6*). Plainly, the inference from these facts is that accelerated agricultural adjustment could be achieved most easily by increasing the proportion of off-farm movers who successfully establish themselves in nonfarm jobs.

With a view to obtaining further insights into this problem an analysis was made of in-farm mobility rates. Unfortunately the Social Security data used in this study did not provide information about the entire nonfarm labor force. Consequently it was not possible to parallel the analysis of off-farm mobility rates by estimating the probability of nonfarmworkers of given characteristics taking farm jobs. However, by expressing the number of in-farm movers as a percentage of all similar persons in the farm labor force, it was possible to determine the relative incidence of in-farm movers in the farm labor force. In the light of previous findings, it was expected that in-farm mobility rates would exhibit similar differences among classes of attributes as were found for off-farm mobility rates. But because off-farm mobility rates are positively correlated with the probability of remaining in nonfarm employment, it was hypothesized that the magnitude of differences in the in-farm rates would be less.

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[11] The main object of the special analysis of the South was to examine the influence of race on mobility. Since most Negroes were farm wage workers, separate equations for each occupation were necessary to permit detailed examination of the race relation. See appendix B for details of these equations.

For example, young persons not only have a higher probability of moving out of agriculture but also younger workers who do move have a higher probability of remaining in nonfarm employment.

Estimates of average in-farm mobility rates for the years 1957 to 1963 by age and race are presented in table 7. As hypothesized, the in-farm rate differentials among age classes were much less pronounced than the corresponding off-farm differentials. In other words, in-farm movers tended to be considerably older than off-farm movers. By contrast, differences in in-farm mobility rates between the two race groups were not less than the off-farm differentials in all regions. In the South, which accounts for most farm-employed Negroes, the hypothesis was confirmed, indicating that of those who left agriculture a larger proportion of Negroes remained in nonfarm employment. In-farm mobility rates among Negroes were relatively high in the North Central region, probably because southern Negro migrants to the large cities of that region tended to turn to local farm labor markets when they failed to find nonfarm jobs.

Similarly, differences in the rate at which individuals moved into the five farm employment categories were less pronounced than the differences in the rate of outmovement (table 8). The rate of in-farm movement among farm wage workers was consistently less than the rate of off-farm movement, but farm operators, whether multiple- or single-job holders, tended to exhibit in-farm mobility rates as high as their off-farm mobility rates.

Mobility into agriculture in low income counties and in counties with a low proportion of commercial farms typically was only slightly less than mobility out of such counties (table 9). By contrast, in higher ~~income~~ counties and in counties with the most commercialized agriculture the in-farm mobility rates were clearly below the off-farm rates. This evidence substantiates the observation made earlier that the farm labor force in the more prosperous farming areas adjusts more readily.

It is difficult to draw definite conclusions from the estimates of in-farm mobility rates by proximity to employment centers (table 9). However, the generalization inferred from the other mobility rate data holds for these estimates also; namely, that the difference between off-farm and in-farm mobility rates were highly correlated with the level of off-farm mobility. Individuals closest to and those farther from an SMSA exhibited the highest off-farm mobility rates, and these areas had the greatest differences between off-farm and in-farm mobility rates.

TABLE 7.—*In-farm mobility rates, by demographic characteristics, and by region* [1]

Race and age	Northeast	North Central	South	Plains	West	Nation [2]
Race:						
Non-Negro	14.4	9.9	12.5	12.2	15.9	12.3
Negro	23.9	18.7	12.0	18.1	26.6	14.3
Age:						
Under 25	21.8	23.6	19.6	26.3	21.9	22.8
25–34	20.8	15.3	19.6	17.4	21.0	18.2
35–44	14.9	9.7	14.1	11.9	17.4	12.7
45 and over	9.4	5.0	8.1	7.3	10.6	7.6
Total	15.1	10.0	12.3	12.3	16.1	12.4

[1] Based on Social Security data. The in-farm mobility rate is the proportion of farm-employed individuals in a given year who in the preceding year were employed exclusively in nonfarm jobs. Pairs of consecutive years were identified as mobility periods. The rates in this table are weighted averages of the rates corresponding to each of the six mobility periods in the years 1957 to 1963.

[2] The continental United States, excluding Alaska.

TABLE 8.—*In-farm mobility rates, by farm employment status, and by region* [1]

Farm employment status	Northeast	North Central	South	Plains	West	Nation [2]
Farm wage work only	7.4	8.2	6.2	7.7	6.2	7.0
Farm self-employment only	1.8	1.8	2.9	2.0	2.1	2.1
Farm wage work and nonfarm job	38.5	42.0	27.2	41.6	36.8	39.3
Farm self-employment and nonfarm wage job	17.9	18.1	22.7	17.2	20.1	19.0
Farm self-employment and nonfarm self-employment	15.3	15.4	18.0	16.4	15.7	16.3
Total	15.1	10.0	12.3	12.3	16.1	12.4

[1], [2] See footnotes 1 and 2, table 7.

TABLE 9.—*In-farm mobility rates, by median family income, percent commercial farms, and proximity to employment centers in the county of destination, and by region* [1]

Family income, commercial farms, and proximity to employment centers	Northeast	North Central	South	Plains	West	Nation [2]
Median family income:						
Under $3,500	11.0	8.7	10.3	9.6	.....	9.9
$3,500 and over	15.0	10.0	15.2	12.9	16.1	13.0
Percent commercial farms [3]:						
0.0– 9.9	14.6	12.1	11.1	13.4	22.6	11.6
10.0–29.9	14.7	10.8	12.4	11.4	17.4	12.2
30.0 and over	15.2	8.6	16.3	12.5	15.7	12.6
Proximity [4]:						
0– 50 miles	15.5	11.4	13.5	15.1	16.4	13.9
51–100 miles	12.7	8.5	11.6	11.2	14.0	10.8
101–150 miles	13.5	8.4	10.7	10.9	17.6	11.0
Over 150 miles	18.6	13.2	.....	11.3	17.3	12.6
Total	15.1	10.0	12.3	12.3	16.1	12.4

[1] See footnote 1, table 7.

[2] The continental United States, excluding Alaska.

[3] Commercial farms were defined as farms with sales of $10,000 and over.

[4] Proximity to an employment center was measured as the distance of the county of farm employment from the nearest SMSA.

In brief, this analysis of mobility confirms and extends the generalization made in a previous study by the authors, that the attributes of individuals which determine the probability of their initial movement out of agriculture also determine their chances of remaining in nonfarm employment. It indicates that the normal operation of labor markets does not serve to reduce income disparities within agriculture or between persons employed in farm and nonfarm occupations.

Migration Patterns and Occupational Mobility

Studies of change in agricultural employment have invariably been limited by the data available to either occupational mobility or migration. One of the unique aspects of the Social Security data used in this study is that they provide information on both changes in the occupation and the location of the individual's employment. This research significantly extends previous analysis of farm labor mobility by examining, for the first time on a national scale, relations between the mobility and the migration of farm labor.

In general, Social Security data indicate the State and county of every job from which the individual obtained coverage. Since many individuals held more than one job in a given year, it was necessary to decide which jobs were to be considered in measuring migration. The following criteria were used to determine the individual's location in any given year:

(a) If the individual was employed exclusively in nonfarm jobs, the county in which his major job was situated determined his location.

(b) If the individual had coverage as a farm operator, his location was identified with that of his farm.

(c) If the individual was farm employed but was not a farmer, his major farm job determined his location.

Distance migrated between consecutive years was measured as the direct mileage between the center of population in the county of origin and the center of population in the destination county. This procedure failed to classify as migrants those individuals who migrated within a county, and exaggerated the distance migrated by those whose mobility was associated with jobs close to county boundaries. These differences are thought to be minor. Further, since the centers of population between most adjacent counties is more than 50 miles, it was not possible to distinguish those who migrated 50 miles or less from those who did not migrate. Accordingly, those whose relocation was 50 miles or less were classified as nonmigrants. Finally, Social Security records information on job location was incomplete for some. These records were omitted from the migration analysis.

The Migration Patterns of Off-Farm Migration

Patently, the monetary costs and emotional effort of changing employment are minimized if occupational mobility is not accompanied by migration. Moreover, it seems reasonable to suppose, and other studies have indicated, that the monetary costs of migration increase greatly with distance. It follows, therefore, that farm employed persons in areas offering limited nonfarm job opportunities might be expected to have lower off-farm mobility rates, and that a higher proportion of those who do move might be expected to migrate, and migrate farther, than persons close to employment centers. The ability and willingness to migrate was believed to be closely related also to demographic factors such as sex, age, and race, to the individual's farm occupation, to his earnings, and to his local opportunities in agriculture. To examine these notions the proportion of off-farm movers who are migrants were compared by each of these characteristics. To assess some of the factors which might draw individuals to move long distances, the change in earnings, the stability of employment, and the industries which they entered were compared for migrant and non-migrant movers.

Age

Since attachments to local communities, family responsibilities, and personal difficulties of adapting to new situations tend to increase with age, the proportion of those who were job mobile and migrant was presumed to be closely determined by age. These expectations were fully confirmed. In all regions the proportion of migrants declined consistently with advancing age (table 10). Typically, about two-fifths of the job mobiles under 25 years also migrated, whereas only one quarter of those over 44 years old were migrants. The frequency of moves in excess of 500 miles were markedly lower for the latter age group. The highest incidence of long-distance migration was frequently among the 25- to 34-year-olds, presumably because the job information on which such moves are based would be more readily available to individuals well established in the labor force and less readily available to persons under 25.

However, it should be noted that only about one-third of all movers were migrants, and that less than one-third of the migrants mover over 500

TABLE 10.—*Percentage of off-farm movers who migrated, by demographic characteristics, and by region* [1]

Region, race, and age	Did not migrate	Distance migrated: 51–150 miles	Distance migrated: 151–500 miles	Distance migrated: Over 500 miles	All movers
Northeast					
Race:					
Non-Negro	76.7	12.0	6.9	4.4	100.0
Negro	58.5	9.9	10.4	21.1	100.0
Age:					
Under 25	70.9	12.8	9.1	7.2	100.0
25–34	73.5	12.7	7.0	6.8	100.0
35–44	74.7	12.2	7.1	6.0	100.0
45 and over	82.6	9.0	4.5	3.9	100.0
Total	74.9	11.8	7.2	6.1	100.0
North Central					
Race:					
Non-Negro	76.1	10.8	7.2	6.0	100.0
Negro	56.3	11.9	13.5	18.3	100.0
Age:					
Under 25	70.1	13.4	9.4	7.3	100.0
25–34	71.3	12.1	8.4	8.3	100.0
35–44	75.3	9.6	8.1	7.0	100.0
45 and over	84.1	8.2	4.3	3.4	100.0
Total	75.7	10.8	7.3	6.2	100.0
South					
Race:					
Non-Negro	72.5	11.4	9.1	7.1	100.0
Negro	61.6	12.6	12.7	13.0	100.0
Age:					
Under 25	59.4	14.0	13.3	13.2	100.0
25–34	63.5	13.2	12.8	10.6	100.0
35–44	72.5	12.2	8.3	7.0	100.0
45 and over	79.0	8.8	7.0	5.3	100.0
Total	69.5	11.7	10.1	8.8	100.0
Plains					
Race:					
Non-Negro	58.4	14.1	16.1	10.9	100.0
Negro	51.2	18.2	21.3	9.3	100.0
Age:					
Under 25	49.8	15.6	21.3	13.4	100.0
25–34	51.6	15.3	19.5	13.7	100.0
35–44	63.2	13.8	13.8	9.3	100.0
45 and over	68.6	12.6	11.9	7.0	100.0
Total	58.0	14.3	16.8	10.8	100.0

TABLE 10.—*Percentage of off-farm movers who migrated, by demographic characteristics, and by region* [1]—Continued

Region, race, and age	Did not migrate	Distance migrated: 51–150 miles	Distance migrated: 151–500 miles	Distance migrated: Over 500 miles	All movers
West					
Race:					
Non-Negro	55.2	15.1	15.5	14.2	100.0
Negro	41.3	20.6	20.6	17.5	100.0
Age:					
Under 25	55.0	16.1	14.7	14.3	100.0
25–34	49.3	13.9	19.6	17.2	100.0
35–44	55.3	15.0	15.0	14.7	100.0
45 and over	54.8	15.7	13.8	11.3	100.0
Total	54.8	15.3	15.6	14.3	100.0
Nation [2]					
Race:					
Non-Negro	67.4	12.7	11.3	8.7	100.0
Negro	58.7	13.2	13.8	14.3	100.0
Age:					
Under 25	60.8	14.4	13.7	11.1	100.0
25–34	61.3	13.5	13.8	11.5	100.0
35–44	68.3	12.4	10.5	8.8	100.0
45 and over	75.5	10.5	8.1	5.9	100.0
Total	66.5	12.7	11.5	9.2	100.0

[1] Computed from Social Security data. Distance migrated was measured as the direct mileage between the center of population in the county of farm employment and the center of population in the county in which the mover's major nonfarm job was located. All movers who moved 50 miles or less were classified as nonmigrants. The proportions in the table are weighted averages of the six mobility periods in the years 1957 to 1963.

[2] The continental United States, excluding Alaska.

miles. The incidence of long-distance migration varied considerably by region, being most common in States west of the Mississippi where distances from employment centers are greater. Significantly, long-distance migration was more frequent in the South than in the Northeast and North Central regions, despite the fact that most counties are close to an SMSA in that region. Presumably the reason for this was the heavy concentration of Negroes in the South.

Race

The proportion of movers who migrated, and particularly the proportion migrating over 500 miles, was much greater for Negroes than for non-Negroes (table 10). In part, this phenomenon is related to the concentration of Negroes in the least skilled wage jobs, for which the main markets are in the largest metropolitan areas. But it is also thought to reflect a system of communication among friends and relatives about job opportunities which is more common among Negroes than among whites, and it is consistent with a labor market in the South which tends to discriminate against Negro workers.

Farm employment status

Farm wage workers, having fewer ties to the local community and possibly better information about alternative employment, had a substantially higher proportion of migrant movers than did farm operators (table 11). On the average, less than 20 percent of the farm operators migrated, whereas about 40 percent of the wage workers migrated on leaving agriculture. The regional variation among the farm wage workers was considerable. In the western regions migration was more common, probably because of greater use of migrant farm labor, and the proportion of migrants was also high in the South, due to the concentration of Negroes in the hired farm labor force. Not surprisingly, farmers who also had self-employment off their farms were the least likely to migrate. More unexpected was the relatively high proportion of migrant single-job farmers compared with those who also had nonfarm wage jobs. It would appear that the single-job farmer had greater difficulty in finding local nonfarm employment because of the limitations of the local job market, whereas farmers more advantageously located for nonfarm employment were able to first become multiple-job holders and then obtain full-time, local, nonfarm jobs.

Earnings while farm employed

The proportion of migrants, and in particular of long-distance migrants, tended to be strongly and

TABLE 11.—*Percentage of off-farm movers who migrated, by farm employment status, and by region* [1]

Employment status and region	Did not migrate	Distance migrated			All movers
		51-150 miles	151-500 miles	Over 500 miles	
Northeast					
Farm wage work only	73.6	10.5	9.4	6.5	100.0
Farm self-employment only	83.6	9.4	3.9	3.1	100.0
Farm wage work and nonfarm job	72.1	13.2	7.6	7.2	100.0
Farm self-employment and nonfarm wage job	87.9	7.8	3.1	1.2	100.0
Farm self-employment and nonfarm self-employment	89.6	6.9	2.9	0.6	100.0
Total	74.9	11.8	7.2	6.1	100.0
North Central					
Farm wage work only	70.2	11.9	8.4	9.6	100.0
Farm self-employment only	83.7	8.6	4.9	2.9	100.0
Farm wage work and nonfarm job	68.5	12.9	9.7	8.9	100.0
Farm self-employment and nonfarm wage job	85.1	8.8	4.4	1.7	100.0
Farm self-employment and nonfarm self-employment	92.0	4.7	2.3	1.0	100.0
Total	75.7	10.8	7.3	6.2	100.0
South					
Farm wage work only	62.3	12.2	12.7	12.9	100.0
Farm self-employment only	79.2	9.5	7.2	4.1	100.0
Farm wage work and nonfarm job	61.9	13.9	12.5	11.7	100.0
Farm self-employment and nonfarm wage job	80.4	10.9	6.2	2.5	100.0
Farm self-employment and nonfarm self-employment	94.7	2.6	2.0	0.7	100.0
Total	69.5	11.7	10.1	8.8	100.0
Plains					
Farm wage work only	52.6	15.8	19.6	12.0	100.0
Farm self-employment only	74.9	12.6	8.4	4.2	100.0
Farm wage work and nonfarm job	50.8	15.2	20.1	14.0	100.0
Farm self-employment and nonfarm wage job	73.8	13.2	9.3	3.7	100.0
Farm self-employment and nonfarm self-employment	89.2	6.1	4.0	0.8	100.0
Total	58.0	14.3	16.8	10.8	100.0
West					
Farm wage work only	53.8	15.1	16.2	14.9	100.0
Farm self-employment only	80.7	9.6	9.6	....	100.0
Farm wage work and nonfarm job	52.2	15.9	16.6	15.3	100.0
Farm self-employment and nonfarm wage job	78.5	13.2	5.6	2.8	100.0
Farm self-employment and nonfarm self-employment	85.9	7.4	2.0	4.7	100.0
Total	54.8	15.3	15.6	14.3	100.0
Nation [2]					
Farm wage work only	61.8	13.2	13.5	11.4	100.0
Farm self-employment only	80.3	9.9	6.5	3.4	100.0
Farm wage work and nonfarm job	60.1	14.3	13.8	11.8	100.0
Farm self-employment and nonfarm wage job	81.3	10.5	5.9	2.4	100.0
Farm self-employment and nonfarm self-employment	91.5	4.8	2.6	1.1	100.0
Total	66.5	12.7	11.5	9.2	100.0

[1, 2] See footnotes 1 and 2, table 10.

negatively related to the earnings of movers when they were farm employed. Data on the proportion of migrants by earnings is shown in table 12 only for the nation, but the regional distributions were essentially similar. It is believed that this relationship is the result of several factors associated with earnings while farm employed. The young, the farm wage workers, the Negroes, all have a higher propensity to migrate and tend to be concentrated in the lowest earning classes.

Median family income

Differences in the proportion of migrants between movers from counties with high family incomes and from counties with low family incomes were relatively small and not uniform among regions (table 13). However, the proportion of movers from the more prosperous areas who migrated over 500 miles was considerably higher. This difference may have been due to better information

TABLE 12.—*Percentage of off-farm movers who migrated, by total earnings while farm employed, the nation* [1, 2]

Total earnings while farm employed	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Under $500	59.9	14.0	13.7	12.4	100.0
$500–$999	60.9	14.1	13.2	11.8	100.0
$1,000–$1,999	65.0	12.4	12.3	10.4	100.0
$2,000–$2,999	69.1	12.9	10.7	7.4	100.0
$3,000–$3,999	73.1	11.9	9.3	5.7	100.0
$4,000–$4,999	75.4	11.9	8.3	4.4	100.0
$5,000–$7,499	78.1	9.9	7.7	4.4	100.0
Over $7,499	82.0	6.8	6.3	5.0	100.0
Total	66.5	12.7	11.5	9.2	100.0

[1, 2] See footnotes 1 and 2, table 10.

and a greater willingness and ability to incur the uncertainty and cost of long-distance migration on the part of movers from such areas.

Percentage commercial farms in county of farm employment

Similar differences in the propensity to migrate were found when movers were classified by the proportion of commercial farms in the county in which they had been farm employed (table 13). The proportion of long-distance migrants was positively related to the percentage of commercial farms. But while the national averages indicate that the incidence of all migration rose sharply from the least to the most commercial farm areas, the regional variation in this relation was wide. In this relation there was the additional influence of farm wage workers who are predominantly employed in the most com-

TABLE 13.—*Percentage of off-farm movers who migrated, by median family income and percent commercial farms in the county of origin, and by region* [1]

Income, commercial farms, and region [2]	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Northeast					
Median family income:					
Under $3,500	.....	.....	.....	.....	100.0
$3,500 and over	74.9	11.8	7.2	6.1	100.0
Percent commercial farms:					
0.0 to 9.9	71.7	13.1	12.1	3.0	100.0
10.0 to 29.9	77.0	11.5	6.7	4.8	100.0
30.0 and over	73.7	11.9	7.1	7.1	100.0
Total	74.9	11.8	7.2	6.1	100.0
North Central					
Median family income:					
Under $3,500	68.8	17.5	9.1	4.7	100.0
$3,500 and over	76.2	10.3	7.2	6.3	100.0
Percent commercial farms:					
0.0–9.9	74.6	12.0	8.5	5.1	100.0
10.0–29.9	77.0	11.5	6.7	4.8	100.0
30.0 and over	74.4	10.9	8.0	6.6	100.0
Total	75.7	10.8	7.3	6.2	100.0
South					
Median family income:					
Under $3,500	71.1	12.6	9.7	6.6	100.0
$3,500 and over	67.8	10.8	10.5	10.9	100.0
Percent commercial farms:					
0.0–9.9	77.1	11.0	8.2	3.7	100.0
10.0–29.9	66.0	13.3	11.7	9.1	100.0
30.0 and over	56.8	9.4	11.1	22.7	100.0
Total	69.5	11.7	10.1	8.8	100.0

TABLE 13.—*Percentage of off-farm movers who migrated, by median family income and percent commercial farms in the county of origin, and by region* [1]—Continued

Income, commercial farms, and region [2]	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Plains					
Median family income:					
Under $3,500	61.1	17.5	15.1	6.3	100.0
$3,500 and over	57.3	13.7	17.2	11.8	100.0
Percent commercial farms:					
0.0–9.9	61.9	18.5	14.4	5.2	100.0
10.0–29.9	63.7	14.9	14.3	7.1	100.0
30.0 and over	54.1	13.6	18.6	13.6	100.0
Total	58.0	14.3	16.8	10.8	100.0
West					
Median family income:					
Under $3,500	.....	.....	.....	.....	.....
$3,500 and over	54.8	15.3	15.6	14.3	100.0
Percent commercial farms:					
0.0–9.9	.....	.....	.....	.....	.....
10.0–29.9	62.4	12.7	13.0	12.0	100.0
30.0 and over	52.2	16.2	16.5	15.0	100.0
Total	54.8	15.3	15.6	15.3	100.0
Nation [3]					
Median family income:					
Under $3,500	68.7	14.2	10.8	6.3	100.0
$3,500 and over	66.1	12.5	11.7	9.8	100.0
Percent commercial farms:					
0.0–9.9	75.0	11.9	8.9	4.1	100.0
10.0–29.9	70.1	12.4	10.1	7.5	100.0
30.0 and over	61.3	13.2	13.4	12.1	100.0
Total	66.5	12.7	11.5	9.2	100.0

[1] See footnote 1, table 10.

[2] Commercial farms were defined as farms with sales of $10.000 and over.

[3] The continental United States excluding Alaska.

mercial farming areas. It is not clear whether this concentration of farm wage workers also affected the differences in migration patterns noted between high and low family income counties. Nevertheless, the significant fact is that neither low income areas nor areas lacking a commercialized agriculture have high migration rates, and consequently that farm workers in such areas rely primarily on local labor markets for nonfarm employment opportunities.

Proximity to employment centers

One of the most interesting factors related to the propensity of migration among movers is their initial proximity to an SMSA. While it would seem reasonable to hypothesize that the closer a potential mover was to an SMSA, the less he would need to migrate, in fact movers from counties within 50 miles of an SMSA had the highest proportion of migrants (table 14).[12] Once again, the effect of the concentration of farm wage workers around SMSA's can be cited to help explain this phenomenon. But there are other factors which appear to be important. First, differences in the proportion of migrant movers were most marked in the South and in the Plains region. The South had a high percentage of hired farm workers, mostly in counties close to an SMSA, and therefore could be expected to have higher proportions of migrant movers from such counties. The majority of counties in the South and in the Plains are far from large metropolitan areas and these labor markets are the magnets for the unskilled migrants. Moreover, the high incidence of Negroes in the southern farm labor force, mostly in counties close to SMSA's, contributed to the propensity for long-distance migration in that region.

Industry of nonfarm employment

The distribution of migrant movers among the industries to which they moved depended on the relative attractiveness of industries to all off-farm movers, as well as on the relative capacity of industries to draw movers over long distances. To

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[12] The extraordinarily high proportion of migrants from counties over 150 miles from an SMSA in the North Central region was associated with a very small number of movers.

TABLE 14.—*Percentage of off-farm movers by proximity to employment centers, and by region* [1]

Region, and proximity to employment center [2]	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Northeast					
0–50 miles	73.8	12.8	7.5	5.9	100.0
51–100 miles	77.4	8.4	5.9	8.3	100.0
101–150 miles	75.2	8.3	8.3	8.3	100.0
Over 150 miles	82.8	9.5	7.1	0.6	100.0
Total	74.9	11.8	7.2	6.1	100.0
North Central					
0–50 miles	71.6	12.4	8.5	7.5	100.0
51–100 miles	83.3	7.9	5.1	3.7	100.0
101–150 miles	83.4	8.4	5.9	2.3	100.0
Over 150 miles	47.5	6.8	8.5	37.3	100.0
Total	75.7	10.8	7.3	6.2	100.0
South					
0–50 miles	58.1	14.6	13.9	13.4	100.0
51–100 miles	83.9	7.7	5.5	3.0	100.0
101–150 miles	79.9	11.5	5.2	3.3	100.0
Over 150 miles	.....	.....	.....	.....	100.0
Total	69.5	11.7	10.1	8.8	100.0
Plains					
0–50 miles	45.6	14.6	21.1	18.7	100.0
51–100 miles	67.6	14.1	13.9	4.4	100.0
101–150 miles	69.2	12.7	11.7	6.4	100.0
Over 150 miles	68.1	15.2	13.8	2.0	100.0
Total	58.0	14.3	16.8	10.8	100.0
West					
0–50 miles	51.6	16.6	16.9	14.9	100.0
51–100 miles	63.2	12.0	8.6	16.2	100.0
101–150 miles	65.8	13.7	9.5	11.1	100.0
Over 150 miles	51.8	12.7	26.2	9.3	100.0
Total	54.8	15.3	15.6	14.3	100.0
Nation [3]					
0–50 miles	60.9	14.2	13.2	11.8	100.0
51–100 miles	77.6	9.6	7.5	5.4	100.0
101–150 miles	74.5	11.3	8.5	5.8	100.0
Over 150 miles	65.1	13.8	15.7	5.4	100.0
Total	66.5	12.7	11.5	9.2	100.0

[1] See footnote 1, table 10.

[2] Proximity to an employment center was measured as the distance of the county of farm employment from the nearest SMSA.

[3] The continental United States excluding Alaska.

examine the first question the distribution within industries was computed for migrant and nonmigrant movers (table 15). Most movers found jobs in manufacturing and in wholesale and retail trade; construction and service industries were also important sources of employment.[13] The relative importance of an industry as a source of employment did not change consistently with distance migrated. However, a higher proportion of migrants found jobs in construction, and a smaller proportion obtained jobs in manufacturing.

The capacity of industries to draw migrants is more clearly shown by the distribution of migrant and nonmigrant movers by industry (table 16). An average of 43 percent of movers entering the construction industry were migrants whereas only about 29 percent of those finding manufacturing jobs were migrants. Government employment also tended to attract a relatively high proportion of migrants.

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[13] Service industries in this study included finance, insurance, and real estate, as well as the industries classified as service industries in the Standard Industrial Classification.

TABLE 15.—*Percentage distribution among industries of migrant and nonmigrant off-farm movers, the nation* [1, 2]

Industry of nonfarm employment[3]	Did not migrate	Distance migrated			All movers
		51-150 miles	151-500 miles	Over 500 miles	
Primary industries	3.3	2.5	3.5	2.5	3.2
Construction	11.9	19.0	18.1	17.1	14.0
Manufacturing	27.8	25.3	25.8	27.9	27.3
Utilities	5.8	5.5	4.4	5.6	5.6
Wholesale and retail trade	29.2	23.1	23.9	26.5	27.5
Services	15.2	14.6	15.8	16.2	15.4
Government	6.7	10.1	8.5	4.3	7.1

[1] See footnote 1, table 10.

[2] The continental United States, excluding Alaska.

[3] Primary industries included agricultural services, forestry, fishing and mining. Service industries comprised finance, insurance and real estate, as well as industries classified as service industries in the Standard Industrial Classification.

TABLE 16.—*Percentage of migrant and nonmigrant off-farm movers, by industry, the nation* [1, 2]

Industry of nonfarm employment[3]	Did not migrate	Distance migrated			All movers
		51-150 miles	151-500 miles	Over 500 miles	
Primary industries	70.0	10.1	12.8	7.3	100.0
Construction	56.6	17.2	14.9	11.3	100.0
Manufacturing	68.0	11.7	10.8	9.5	100.0
Utilities	69.3	12.4	9.1	9.2	100.0
Wholesale and retail trade	70.5	10.6	10.0	8.9	100.0
Services	66.5	12.0	11.8	9.7	100.0
Government	62.7	18.0	13.7	5.6	100.0

[1, 2] See footnotes 1 and 2, table 10.

[3] See footnote 3, table 15.

Change in earnings

Comparison of the change in earnings resulting from off-farm mobility with the distance migrated by movers, revealed no uniform decline in losses or increase in gains with distance migrated. The relation between earnings and migration was apparently too complex to be evident in such a simple analysis. A multivariable analysis of this relation is discussed in a later section.

Stability of employment

Two kinds of stability were examined in relation to distance migrated by off-farm movers. Occupational stability was measured by determining whether the individual was still exclusively nonfarm employed, had returned to farm employment, or had failed to obtain social security coverage, in the year following the mobility period. Locational stability was gaged by determining whether the individual was still in the same county in the year following the mobility period.

For the nation as a whole, an average of 73 percent of all movers remained in exclusively nonfarm employment, 18 percent returned to farm employment, and 9 percent failed to attain coverage (table 17).[14] Locational stability was much lower. Only 46 percent of all movers stayed in the county to which they had migrated. Occupational stability was only slightly higher for migrants. The distance migrated had little influence on the stability of employment, but did reduce locational stability. Of the nonmigrant movers (those who moved 50 miles or less) more than 60 percent remained in the same county, whereas of those who had migrated up to 150 miles only 15 percent stayed on in the county to which they had moved, and only 11 percent of those who migrated over 500 miles remained in the same county. Thus, persons who migrated in the process of off-farm mobility were most likely to migrate again in the following year.

The influence of migration on stability was also examined by the size of the city chosen by off-farm movers.[15] A priori, it was assumed that both occupational and locational stability would increase

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[14] The classification "no coverage" includes some individuals who were working in noncovered jobs, those who did not meet the minimum income requirements for participation, those who were retired, disabled, or dead, as well as those who were unemployed.

[15] These relations were examined for the years 1957–61.

TABLE 17.—*Occupational and locational stability of migrant and nonmigrant off-farm movers, the nation*[1, 2]

Occupation and location in year following mobility period	Did not migrate	Distance migrated: 51–150 miles	Distance migrated: 151–500 miles	Distance migrated: Over 500 miles	All movers
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Still nonfarm, same county	46.7	6.4	5.1	3.3	32.9
Still nonfarm, different county	25.6	68.6	69.0	70.9	40.2
Farm employed, same county	15.5	9.0	8.5	7.3	13.1
Farm employed, different county	3.3	7.4	7.7	9.2	4.9
No coverage[3]	8.9	8.5	9.7	9.3	9.0

[1] See footnote 1, table 12.

[2] The continental United States, excluding Alaska.

[3] The classification "no coverage" includes some individuals who were working in noncovered jobs, those who did not meet the minimum income requirements for participation, those who were retired, disabled, or dead, as well as those who were unemployed.

with city size, because larger labor markets would afford individuals more choices of employment. No relation was found between occupational stability and distance migrated for any city size. But over 80 percent of movers going to cities with populations of over 1 million remained in nonfarm jobs, while less than 70 percent of those going to places of less than 50,000 stayed exclusively in nonfarm employment (table 18). More striking was the decrease in the proportion of off-farm movers who returned to farmwork with increased city size: from 23 percent of those who found nonfarm jobs in places of under 50,000 to about 12 percent of those who had moved to cities of over 1 million. As might be expected, migration increased with the size of city chosen by migrants. Employment stability increased with city size for migrants and nonmigrants alike. The slightly greater occupational stability observed among migrant movers was undoubtedly due to the fact that relatively more migrants went to the larger cities where employment opportunities were better.

The majority of off-farm movers did not go to cities of 50,000 or over, although three-fifths of all movers had had farm jobs within 50 miles of an SMSA. The evidence adds support to the contention that the farm labor force tends to rely on local sources for nonfarm employment opportunities.

Conclusions

Most off-farm movers do not migrate on leaving agriculture. Those characteristics of the farm employed which are associated with high off-farm mobility rates are associated also with a high propensity to migrate; the proportion of migrants is highest among off-farm movers who are young, Negroes, or farm wage workers, and tends also to be high among movers from prosperous farm areas,

TABLE 18.—*Occupational and locational stability of off-farm movers by city size, the nation*[1, 2]

Item	City size of off-farm movers: 1 million and over	City size of off-farm movers: 250,000–999,999	City size of off-farm movers: 50,000–250,000	City size of off-farm movers: Below 50,000
	Percent	*Percent*	*Percent*	*Percent*
Distribution of all off-farm movers	16.6	18.2	13.8	51.4
Proportion of migrant off-farm movers	48.7	42.9	38.9	23.9
Occupation and location in year following mobility period (percent distribution in each city size)				
Still nonfarm, same county	26.4	29.7	30.5	35.3
Still nonfarm, different county	54.2	46.2	40.7	31.9
Farm employed, same county	8.2	10.7	11.8	17.9
Farm employed, different county	4.1	5.0	6.4	5.1
No coverage[3]	7.1	8.4	10.5	9.9

[1] Computed from Social Security data. Distance migrated was measured as the direct mileage between the center of population in the county of farm employment and the center of population in the county in which the mover's major nonfarm job was located. All movers who moved 50 miles or less were classified as non-migrants. The proportions in the table are weighted averages of the three mobility periods in the years 1957 to 1961.

[2] The continental United States, excluding Alaska.

[3] The classification "no coverage" includes some individuals who were working in noncovered jobs, those who did not meet the minimum income requirements for participation, those who were retired, disabled, or dead, as well as those who were unemployed.

in close proximity to employment centers. Migrant and nonmigrant movers differ little in their choice of industries but migrants are attracted more than other movers to jobs in construction and in government. Persons who migrate when they leave farming are most likely to migrate again, but are slightly less likely to return to farm employment. Short-run occupational stability is related to the size of the labor market; movers are more likely to remain in nonfarm employment if they first find jobs in large cities. However, the majority of movers seek employment on small local labor markets. Those who migrate, particularly those who migrate long distances, do so mainly to find jobs in large cities.

These observations all point to a generalization of considerable importance; namely, that it is those farm-employed persons who rely on small local labor markets for a nonfarm job who have the lowest probability of successfully moving out of farm employment.

The Migration Patterns of Nonfarm-Farm Movers

It has already been established that in-farm movers predominantly are persons who had previously left agriculture, but had failed to establish themselves in nonfarm employment and returned to farm work. It would appear to follow, therefore, that in most respects in-farm movers and off-farm movers would exhibit similar migration patterns.

Analysis of the in-farm moves revealed a slightly higher frequency of migration than was observed among off-farm moves in most regions.[16] This pattern was evident among all age groups, but was more marked for older movers. It was also more apparent among non-Negroes and those who became farm operators than among Negroes and those who became farm wage workers. It seems probable that many farm operators did not sell their farms on leaving the farm labor force, and were thus readily able to return to farming when laid off from their nonfarm jobs. Most farm operators are older persons and non-Negro, and persons with these characteristics would have had the strongest community ties.

Similarly, the proportion of migrants among in-farm movers tended to be uniformly, but only slightly, higher than among off-farm movers, when movers were compared by the family income, the percentage of commercial farms, and the proximity to labor markets, of the county in which they were farm employed.

In-farm movers differed significantly from off-farm movers, however, with regard to the short-run stability of their change in employment. On the average, only 63 percent of the in-farm movers were still farm employed a year later, and over 20 percent had returned to exclusively nonfarm employment (table 19). Moreover, a higher proportion of migrant in-farm movers remained in agriculture although most of them did not remain in the same county. Clearly, migrant in-farm movers were predominantly wage workers.

In brief, the migration patterns of in-farm and of off-farm movers were essentially similar. The most migratory among the in-farm movers, as among the off-farm movers, were the young, those who had farm wage work, Negroes, and those who were farm employed in counties having relatively high family incomes, a high proportion of commercial farms, and located within 50 miles of an SMSA. The permanence of changes to farm employment was relatively low. The proportion of in-farm movers, particularly migrant in-farm movers, who remained in farm jobs for at least 2 years was significantly less than the proportion of off-farm movers who remained in nonfarm employment.

Change in Earnings from Occupational Mobility

In a sense the preceding discussion regarding the high rate of both out-mobility and back-movement foreshadows the results of the analysis of the effect that mobility has upon the earnings of the persons involved. It seems reasonable to assume that the majority of those who change from farm to nonfarm employment do so with the expectation of improving their income. But, as table 20 shows dra-

TABLE 19.—*Occupational and locational stability of migrant and nonmigrant in-farm movers, the nation* [1, 2]

Occupation and location in year following mobility period	Did not migrate	Distance migrated: 51–150 miles	Distance migrated: 151–500 miles	Distance migrated: Over 500 miles	All movers
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Nonfarm, same county	18.9	9.5	8.3	7.0	15.1
Nonfarm, different county	3.9	8.4	8.6	9.7	5.7
Still farm, same county	38.5	5.1	5.7	3.6	26.4
Still farm, different county	23.4	59.1	60.7	62.4	36.7
No coverage [3]	15.3	18.0	16.7	17.3	16.0

[1, 2, 3] See footnotes 1, 2, and 3, table 18.

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[16] See appendix C for tables showing the migration patterns of in-farm moves.

TABLE 20.—*Percentage of mobile persons experiencing gains and losses the first year after leaving farm employment*

Mobility period	Mean gain in earnings	Loss over $499	Loss, $1–$499	Gain, $0–$499	Gain, $500–$999	Gain, over $999
	Dollars	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
1957–58	36.73	26.3	21.9	22.6	11.7	17.5
1958–59	233.62	22.7	18.4	20.5	13.8	24.6
1959–60	212.20	22.1	20.0	20.9	14.1	22.9

matically, a high proportion of those who change occupations do not improve their income in the short-run by change.

In each of the three periods of mobility studied, more than 40 percent of those leaving farming in one year had lower incomes in their nonfarm occupations the following year. Indeed, the distribution of gains and losses was such that the average gain for all mobile persons in the sample was relatively modest. A reduction in earnings appears to be the major element in the decision of many persons who leave farm employment to return to it after 1 or 2 years of nonfarm work.

Short-Run Earnings

In order to determine, if possible, what factors were associated with a change in earnings the first year following mobility, multiple regression analyses were used. Since several of the variables were discrete variables and many of the relationships were believed to be nonlinear, a form of dummy variable analysis was used. The equations were run for the conterminous United States for three periods and, after examining the results, the regressions for the five regions were run with the 3 years' data grouped.[17]

The dependent variable in this analysis was the change in earnings, positive or negative, experienced by an individual who was farm employed in one year and exclusively nonfarm employed in the second year. The independent variables used were: race, age (four age groupings), location of county of farm employment relative to an SMSA (four distance groups), major industry of nonfarm employment (eight industry groups), the distance between the county of farm employment and the county of nonfarm employment (four groups), the employment status of the individual in farming; and the income level of the individual in his last year of farm employment.

A summary of the results of these analyses is shown in table 21. Several things are apparent from the regression results. First, the independent variables do not explain a major portion of individual variance in change in earnings following job mobility. Second, the net effects—as measured by the regression results—are often quite different from those one finds from simple cross tabulations of individual characteristics and change in earnings. This is because persons with certain characteristics tend to follow certain mobility and migration patterns, as explained earlier. Finally, the unavailability and omission of certain variables substantially reduced the explanatory power of the regression analyses.

Despite these problems the regression analyses were useful, because several variables turned out to be significant and consistently related to income change. One of these was race. Negroes had significantly lower income gains from occupational mobility than non-Negroes, both at the national level and in all regions but the North Central and West. This, of course, would account in part for the significantly lower mobility rates found for Negroes and discussed earlier.

Another significant variable was age over 44 years. In every region and in the nation, persons who were mobile after age 44 had significantly lower gains than younger age groups. By and large there were no significant effects for age for persons up to age 45.

Contrary to expectations, neither location of the county of farm employment relative to SMSA or the distance migrated was significantly related to gains from occupation mobility. It is believed, however, that had city size of the area of nonfarm employment been included that it would have proven to be positively and significantly related to income gains. The reason for this belief is covered in the section on long-run income results of mobility.

Only two of the industries of nonfarm employment seemed consistently related to income gains from mobility. These were wholesale and retail trade and government; both were negatively related to income gains in all regions and at the national level. In addition, in three regions—the Northeast, North Central, and Plains—there was a significant negative relationship between employment in the construction industry and income gains from mobility.

The location of the farm employment of the job changer gave mixed results. In the equation for the nation as a whole, location was not significant. However, in the Northeast, North Central, and

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[17] The specific regression results are included in appendix D.

TABLE 21.—*Results of regression analyses of change in earnings the first year following farm-nonfarm mobility* [1]

Item	Conterminous United States (1957)	Northwest	North Central	South	Plains	West
Race:						
Negro	–	–	NS	–	–	NS
Omitted: White.						
Age:						
25–34	NS	NS	NS	–	NS	NS
35–44	NS	NS	NS	NS	–	NS
45 and over	–	–	–	–	–	–
Omitted: Under 25.						
Distance migrated:						
51–100 miles	+	NS	–	NS	NS	NS
101–150 miles	NS	NS	NS	NS	NS	NS
151 miles or more	NS	NS	NS	–	NS	NS
Omitted: Under 51 miles.						
Industry of nonfarm employment:						
Mining	NS	NS	–	NS	NS	–
Construction	NS	–	–	NS	–	NS
Utilities	NS	–	–	NS	NS	NS
Wholesale and Retail Trades	–	–	–	–	–	–
Government	–	–	–	–	–	–
Finance and Services	NS	NS	–	NS	–	NS
Military and Unknown	NS	NS	–	NS	NS	NS
Omitted: Manufacturing.						
Location relative to SMSA:						
51–100 miles	NS	–	–	–	NS	NS
101–150 miles	NS	NS	–	–	NS	NS
Over 150 miles	NS	–	NS	NS	NS	NS
Omitted: Under 51 miles.						
Farm employment status:						
Single-job farm wage worker	NS	NS	NS	NS	+	+
Multiple-job farm wage worker	+	NS	+	NS	+	+
Multiple-job farm operator-NFW	NS	–	NS	NS	NS	NS
Multiple-job farm operator-SEO	+	NS	+	NS	+	+
Omitted: Single-job farm operator.						
Earnings in farming:						
$1,200 to $1,799	–	–	–	NS	NS	NS
$1,800 to $2,399	–	–	–	–	–	NS
$2,400 to $2,999	–	–	–	–	–	–
$3,000 and over	–	–	–	–	–	–
Omitted: Under $1,200.						

[1] The signs indicate whether the relationship was significant at the .05 level and the nature of the relationship. NS means that the coefficient was not significantly different from zero at the .05 level.
NFW = nonfarm wage worker.
SEO = nonfarm self-employed.

South the greater distances from an SMSA were negatively associated with income change from mobility. Distance was never significant in the Plains or Western regions where rural population is greatly dispersed.

The beginning employment status of the mobile worker also gave mixed results. At the national level and in three of the regions the multiple-job-holding wage worker received significantly higher gains than single-job farm operators. The same held for farm operators who were also self-employed in the nonfarm sector before leaving farming. Thus, it appears that nonfarmwork experience in and of itself is not the prime factor, although significant for farm wage workers.

The income of the individual in farming turned out to be one of the most significant factors associated with income change resulting from occupational mobility. The relationship was negative in the national analysis and in virtually all of the regions; i.e., as income in farming rises, the absolute level of income gain from changing jobs declines. Thus, on the average, the lower income workers in agriculture make larger absolute gains from changing to nonfarm occupations than do higher income workers in agriculture. This, on the face of it, suggests that occupational mobility reduces disparity in incomes, but as we shall see in the next section this is not true over a long period of time.

The averages, however, do not tell the complete story, for the distribution of gains and losses also is important. Table 22 shows this distribution for a single year which is representative of the other years we observed. The persons with the lowest earnings in agriculture (under $1,200) were heavily concentrated in the groups of small gains and small losses. As the level of earnings increased the distribution of gains and losses changed, with the highest income persons (over $3,000) most heavily concentrated in the large losses. As earnings rose there was a steady rise in the proportion of job-changers who lost $500 or more, but there was not an offsetting decline in the proportion gaining $1,000 or more.

A tabulation of gains according to the income level of the county of farm employment did not suggest any significant difference between low-income and high-income counties.

All of these factors taken together seem to suggest that the gains in earnings from changing from farm to nonfarm employment are primarily a function of some individual characteristics rather than of the areas where the individuals live. In other words, race, age, beginning employment status, and beginning income appear to be much more significant than the location of the area, the distance migrated to nonfarm employment, or the industry of nonfarm employment. As will be pointed out later, initial income change appears to be an important determinant of whether the individual remains in nonfarm employment; therefore, further identification of the factors determining it appears highly important.

Long-Run Earnings Experience of Mobile Persons

It was our hypothesis that the initial change in earnings is a relatively good indicator of the individual's expected long-run earnings and that it would be regarded as such by most persons who changed occupations. Thus, we find that, especially for low income workers, the earnings experience the first year after mobility is an important determinant of the probability of the individuals returning to farming.

The evidence suggests that there is a strong relationship between short-run earnings change and the long-run experience (table 23). Indications are, however, that individuals who sustained large losses in earnings in their first year after mobility had higher long-run earnings than either those who had small short-run losses or small short-run gains. This is believed to be related to the different nature of the individuals who had the large short-run losses; i.e., they were mostly from those with higher earnings from farm employment.

Since there is not a perfect relationship between short-run and long-run earnings, and since some individuals certainly use more than a single year's income experience as a guide to further changes in occupation, we investigated the factors associated with the long-run earnings after mobility.

In order to measure some of the significant net relationships, a regression analysis similar to the one discussed in the previous section was used. The dependent variable in this case was the mean earnings in the years following occupational mobility. A summary of the results is shown in table 24. In general, the results of this analysis were more satisfactory, at least insofar as the explanatory power of the independent variables included.

Several variables were found to be significantly associated with the mean earnings of persons who left farming for nonfarm jobs. With few exceptions they were quite consistent in both the national and regional analyses.

Race was a significant factor at the national level and in each of the regions. Negroes had significantly lower mean earnings than non-Negroes after mobility.

As in the earlier analysis, the relationship of age to earnings was not a simple linear function. Once

TABLE 22.—*Change in earnings of farm-nonfarm movers between 1957 and 1958*
[Percentage of workers]

Earnings in 1957	Loss over $499	Loss $1–$499	Gain $0–$499	Gain $500–$999	Gain over $999	Total
Under $1,200	9.7	29.9	30.7	13.6	16.1	100
$1,200 to $1,799	34.4	20.6	16.2	9.3	19.5	100
$1,800 to $2,399	33.3	13.6	19.3	12.8	21.0	100
$2,400 to $2,999	39.2	12.7	14.9	12.9	20.3	100
$3,000 and over	46.1	14.0	15.5	8.5	15.9	100
All mobile workers	26.3	21.8	22.6	11.7	17.6	100

TABLE 23.—*Long-run earnings of mobile workers, by size of short-run gains and losses*

Mobility period	Change in earnings the first year after mobility				
	Loss over $499	Loss $1–$499	Gain $0–$499	Gain $500–$999	Gain Over $999
1957–58	$2,223	$1,755	$2,087	$2,564	$4,021
1958–59	2,132	1,653	2,000	2,509	3,862
1959–60	2,217	1,628	2,077	2,565	3,941

TABLE 24.—*Results of regression analyses of factors related to average annual earnings of mobile farm workers* [1]

Item	Conterminous United States (1957)	Northwest	North Central	South	Plains	West
Race:						
Negro	–	–	–	–	–	–
Omitted: White.						
Age:						
25–34	NS	NS	NS	+	NS	NS
35–44	NS	NS	NS	NS	–	NS
45 and over	–	–	–	–	–	–
Omitted: Under 25						
Distance migrated:						
51–100 miles	NS	NS	NS	NS	NS	NS
101–150 miles	NS	NS	NS	NS	NS	NS
151 miles or more	NS	NS	NS	+	NS	NS
Omitted: Under 51 miles.						
Industry of nonfarm employment:						
Mining	+	–	NS	NS	NS	–
Construction	–	–	–	–	–	NS
Utilities	NS	NS	NS	NS	NS	NS
Wholesale and retail trades	–	–	–	NS	–	–
Finance and services	NS	NS	–	NS	NS	NS
Government	–	–	–	–	–	NS
Military and Unknown	NS	NS	NS	+	NS	+
Omitted: Manufacturing.						
Location relative to SMSA:						
51–100 miles	–	–	–	–	–	–
101–150 miles	–	NS	–	–	NS	–
Over 150 miles	NS	–	NS	NS	NS	–
Omitted: Under 51 miles.						
Farm employment status:						
Single-job farm wage worker	–	–	NS	–	NS	NS
Multiple-job farm wage worker	–	–	NS	–	NS	NS
Multiple-job farm operator-NFW	–	–	–	–	–	–
Multiple-job farm operator-SEO	+	+	+	+	+	+
Omitted: Single-job farm operator.						
Earnings in farming:						
$1,200 to $1,799	+	+	+	+	+	+
$1,800 to $2,399	+	+	+	+	+	+
$2,400 to $2,999	+	+	+	+	+	+
$3,000 and over	+	+	+	+	+	+
Omitted: Under $1,200.						
Experience:						
Percent of years of covered employment	+	+	+	+	+	+

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[1] The signs indicate whether the relationship was significant at the .05 level and the nature of the relationship. NS means that the coefficient was not significantly different from zero at the .05 level.

NFW = nonfarm wage worker.

SEO = nonfarm self-employed.

again, those who were over 44 years old at the time of mobility had significantly lower earnings in subsequent years than the younger persons. There was no apparent difference between the age groups up to age 45. Thus, it appears that persons leaving farm employment after age 44 incur both lower initial gains in earnings and lower longer run earnings after mobility than their younger counterparts. Given these experiences it is little wonder that the initial rate of outmovement is very low among those over 44 and that the subsequent backmovement is very high. As our nonfarm labor market has operated in recent years it has not been attractive to farm people over 44 years old.

In general it appears that the distance migrated had no significant relationship to long-time earnings. Although there was a significant relationship for one distance variable in the national analysis none of the regions had a similar relationship, suggesting the national equation in this case provides specious results. Unfortunately the measures of city size could not be included in the regression analyses. It appears, however, that if they were included there would be a significant positive relationship between city size and long-run earnings. Gross tabulations show such a relationship (table 25). However, as pointed out earlier, long-distance migration is primarily an action of the Negroes and the young, characteristics which have offsetting effects in earnings experience. Therefore, the main advantage of the higher earnings associated with large cities probably goes largely to those who leave farming in nearby areas.

TABLE 25.—*Long-term income experience of farm to nonfarm movers, 1957–58*
[Mean earnings, 1957–63]

City size in county of nonfarm employment	Total	Distance moved				
		0–51 miles	51–100 miles	101–150 miles	Over 151 miles	Distance unknown
Over 1 million	$2,917	$3,159	$2,605	$3,027	$2,617	$2,482
250,000 to 999,999	2,627	2,750	2,567	2,481	2,460	2,152
50,000 to 249,999	2,395	2,361	3,186	3,285	2,089	2,599
Under 50,000	2,295	2,316	2,910	2,168	2,181	2,153
Total	2,456	2,496	2,793	2,630	2,340	2,179

Three industries of nonfarm employment were significantly related to long-run earnings. They were construction, wholesale and retail trade, and government. Persons entering these industries had lower long-term earnings than those entering manufacturing employment and the other industry groups. These, of course, were the same industries which also had lower income gains the first year after mobility, showing the close relationship between the initial experience and the long-run experience.

Whereas the location of farm employment had no apparent relationship to initial income change from mobility, it was significant in long-term earnings experience. Persons whose farm employment was in locations more remote from SMSA's had significantly lower long-term earnings than those whose farm employment was within 50 miles of an SMSA. This is due largely to the fact that most people who leave farm jobs take their nonfarm employment in the local areas. These more remote local areas often have lower earnings for a given occupation than do those labor markets in and near the larger cities; therefore, the long-term earnings of those in more remote areas is lower even though their absolute gains from the change is about the same.

The relationship between beginning employment status in farming and long-time earnings after leaving farming are not completely clear. For instance, in the national analysis both single- and multiple-job farm wage workers had lower long-term earnings after mobility than single-job farm operators. But, this relationship was statistically significant in only two of the regions—the Northeast and the South—even though farm wage workers in all other regions had lower long-run nonfarm earnings. Among the farm operator categories the situation was more consistent. For the nation and in every region, persons who were multiple-job farm operators prior to mobility had significantly *lower* long-run earnings than single-job farm operators. On the other hand, those multiple-job farm operator who had nonfarm self-employment prior to mobility had consistently higher long-run earnings after leaving farming.

There are plausible reasons for this. Farm operators who simultaneously hold nonfarm wage jobs prior to leaving farming obviously have such jobs within commuting distance of their farm. More than likely their nonfarm job is chosen in part with their farming in mind. Moreover, when they leave farming, it usually is to devote their time exclusively to their present nonfarm job. Therefore, when they become exclusively nonfarm employed it is likely to be in a job partially circumscribed by their earlier farm employment. Single-job farm operators, however, may be less circumscribed both as to location and type of nonfarm work since they apparently go directly from farming to nonfarm employment.

The case of the farmers who had nonfarm self-employment appears to be one of individuals who leave farming because they believe that it prevents their reaching their full potential in their nonfarm employment. They have both high initial gains and high long-run earnings, suggesting that their expectations of income gains tend to be substantiated.

One of the most important sets of variables related to long-term earnings experience after leaving farming is the earnings level of the individual in farming. This relationship was positive and increased in magnitude as one went up the earnings scale. Thus, while low income farmworkers received the largest *average* initial gains, in the long run there was a strong positive relationship between earnings in agriculture and subsequent nonfarm earnings. This suggests that those characteristics which cause an individual to be poor in farming are likely to have the same effect in nonfarm employment. Or to put it another way, *farm-nonfarm occupational mobility does not seem to close the income gap between the poor and those better off*—indeed it may widen it.

A final variable in the analyses was the proportion of years after initial mobility that the individual had covered employment. Not surprisingly, the higher proportion of the years that an individual was employed, the higher average long-run earnings. Employment stability as well as other factors is important to one's income, and it will be discussed in the next section.

In general, long-term income is related to many of the factors associated with the initial change in income following occupational mobility. Age and race had the same negative relationship to long-term earnings as to the initial gains. Entering nonfarm employment in construction, wholesale and retail trades, and government had the same depressing effect upon long-term earnings as on an initial change in earnings.

The proximity of an individual's farm employment to a larger urban area was found to not significantly affect the change in short-run earnings from mobility. Over the long run, however, those closest to the larger labor markets had significantly higher earnings than did those who were more remote. This appears to be due to the higher rates of earnings in these larger labor markets.[18]

The effect of beginning employment status was more important to long-term earnings than to the initial change and in general the relationships were reversed. Previous nonfarm wage employment had a positive relationship to initial change in earnings for farm wage workers and a negative relationship to long-run earnings of both farm wage workers and operators.

Perhaps the greatest differences came relative to the individual's previous earnings in agriculture. Initial change in earnings was negatively associated with farm income, whereas long-run earnings experience was strongly and positively related to previous farm income.

Occupational Instability and Income

The relationship between gains in earnings, long-run earnings, and subsequent backmovement to farming appear very important. Therefore, we attempted to devise a measure of employment stability by measuring shifts between farm employment, nonfarm employment, and no covered employment. Using the classification described in appendix A, we coded the employment status of each individual each year. We then calculated the changes in this code for each individual, summed the changes without regard to sign and used the resulting value as an *index of instability*. The lowest value of the index (1) means the individual made a single occupation change (farm to nonfarm) in the period under study and then maintained his nonfarm status continuously. A high value means the individual changed from one status to another (including no coverage) in almost every year.

The relationship between our index of instability and earnings is shown in table 26. It shows that as occupational instability rises mean earnings per year over the 7-year period drop sharply. The reasons for the decline in average earnings are twofold: the number of years of covered employment drops sharply and the earnings per year of covered employment also drop markedly. Persons subject to high degrees of employment instability thus suffer from two problems—frequent unemployment and low earnings when they are employed.

TABLE 26.—*Employment instability, earnings, and years of covered employment for persons making farm to nonfarm occupation changes between 1957 and 1958*

Index of occupational instability	Mean earnings per year 1957–63	Mean years of covered employment between 1957 and 1963	Mean earnings per year of covered employment
1	$3,416	7.0	$3,416
2	2,968	7.0	2,968
3	2,320	6.4	2,225
4	1,073	4.8	1,565
5	631	4.0	1,104
Total, all mobile workers in 1957–58	$2,458	6.3	$2,731

In order to identify some factors associated with employment instability we used regression analyses similar to the two previous ones, with the instability index as the dependent variable (table 27).[19]

These analyses included the income change experienced in the first year of nonfarm employment as an independent variable, on the belief that persons who make gains in their first year of nonfarm employment are likely to remain in nonfarm occupations. This assumption appears to be correct. In the national analysis and each of the regions the change in income the year following mobility was positively associated with subsequent occupational stability.

Surprisingly, race was not associated with occupational instability in any regional analysis or in the national one. Despite the fact that Negroes average smaller initial gains and lower long-run earnings upon leaving farming, there is no evidence that they are subject to less occupational stability or more frequent backmovement into farming than whites.

The age of the out-mover from farming turned out to be strongly related to subsequent occupational mobility. Every age group above age 24 was positively related to instability in every regional analysis and the national. Moreover, for each older age group the relationship was larger; thus, the older the individual when he left agriculture the higher the subsequent level of occupational instability and, as we found earlier, the rate of backmovement into farming.

Neither the distance the individual migrated to his nonfarm employment nor the location of the

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[18] This higher rate was noted in Hathaway (4).

[19] The grouping of the 3 years in the regional analyses probably reduced the R^2 of these regressions, inasmuch as the maximum value under the index may be a function of the number of years involved. Since the regional equations were very similar to the 3-year national equations, the grouping of years seems to make little difference.

TABLE 27.—*Results of regression analysis of factors relating to occupational instability of farm-nonfarm job changers* [1]

Item	Conterminous United States (1957)	Northwest	North Central	South	Plains	West
Income change	–	–	–	–	–	–
Race:						
Negro	NS	NS	NS	NS	NS	NS
Omitted: white.						
Age:						
25–34	+	+	+	NS	+	+
35–44	+	+	+	+	+	+
45 and over	+	+	+	+	+	+
Omitted: Under 25.						
Distance migrated:						
51–100 miles	+	NS	NS	NS	NS	NS
101–150 miles	NS	NS	NS	NS	NS	NS
151 miles or more	NS	NS	+	NS	NS	NS
Omitted: Under 51 miles.						
Industry of nonfarm employment:						
Mining	+	NS	NS	NS	NS	+
Construction	+	NS	+	NS	NS	NS
Utilities	NS	NS	+	NS	NS	NS
Wholesale and Retail Trades	+	+	+	+	NS	NS
Finance and Services	+	NS	NS	NS	NS	NS
Government	NS	NS	NS	NS	NS	NS
Military and unknown	NS	NS	NS	NS	NS	NS
Omitted: manufacturing.						
Farm employment status:						
Single-job farm wage worker	–	NS	–	NS	–	–
Multiple-job farm wage worker	–	–	–	–	–	–
Multiple-job farm operator-NFW	–	–	–	–	–	–
Multiple-job farm operator-SEO	–	–	–	NS	–	–
Omitted- Single-job farm operator.						
Earnings in farming:						
$1,200 to 1,799	–	–	–	–	–	–
$1,800 to 2,399	–	–	–	–	–	–
$2,400 to 2,999	–	–	–	–	–	–
$3,000 and over	–	–	–	–	–	–
Omitted: Under $1,200.						
Location relative to SMSA:						
51–100 miles	NS	NS	NS	NS	NS	NS
101–150 miles	NS	NS	NS	NS	NS	NS
Over 150 miles	NS	NS	NS	NS	NS	NS
Omitted: Under 51 miles.						

[1] The signs indicate whether the relationship was significant at the .05 level and the nature of the relationship. NS means that the coefficient was not significantly different from zero at the .05 level.

NFW = nonfarm wage worker.

SEO = nonfarm self-employed.

originating county relative to SMSA's appeared related to subsequent occupational stability. Long-distance migrants or those living in areas distant from large urban areas *do not* appear to be subject to greater occupational instability, as some have suggested.

Neither does the nonfarm industry entered by movers seem to have a major effect upon subsequent occupational stability. Several industries (mining, construction, wholesale and retail trade, and finances and services) appeared related to greater instability in the national analysis; but, with the exception of wholesale and retail trade none of them were so related in the regional analyses.

Beginning employment status was related to occupational stability after farm-nonfarm mobility. Hired farm workers showed significantly more stability after mobility than did single-job farm operators at the national level and in three of the five regions. In the Northwest and South they were not different from single-job farm operators.

Although previous nonfarm work experience was not found to be very significant in determining either initial gains in earnings or long-time average earnings after leaving farming, it turned out to be highly significant in subsequent occupational stability. Those who had worked in nonfarm industries prior to leaving farming had significantly more stable occupational patterns after leaving farming. Probably a combination of nonfarmwork experience and seniority combined produce this effect, or it may be due to the fact that multiple-job holders normally do not cut their ties to agriculture until their nonfarm employment situation is relatively well established.

The individual's income in agriculture also turned out to be significantly related to his subsequent occupational stability. As the income from farm employment rose the nonfarm job stability after mobility also increased, and each higher income class gained in this regard. The gross tabulations did not suggest any relationship between the income of the area of farm employment, however.

In general, occupational stability after leaving farm employment appears to be a function of age, previous nonfarmwork experience, income level in farming, and the income change experienced in the first year of nonfarm employment. The young, the higher income persons in farming, those with nonfarm work experience, and those making large income gains in their first year of nonfarmwork tend to have the most stable occupational patterns. These are the persons who leave farm employment and stay out. Many of the others who take nonfarm employment return to farming temporarily or permanently and thus account for the large backmovement into farming discussed earlier.

Mobility, Migration, Earnings, and Employment Stability

The interrelations between mobility, migration, changes in earnings, and occupational stability are many and complex. It appears reasonable to assume that the major reason for both occupational mobility and migration is primarily the hope of economic gain. But, as we have seen, a very large portion of the people who change from farm to nonfarm jobs do not achieve large initial economic gains by the change. Long-run earnings appear closely related to occupational stability and this in turn is strongly associated with the short-run, first-year earnings experience in nonfarm employment.

It is clear that to increase the occupational stability of farm-nonfarm job changers, two elements are crucial. One is to improve their preparation for nonfarmwork and the other is to find both general and specific ways to help willing and able workers to achieve the higher earnings they expect from the change to nonfarmwork.

As the labor market functioned in the years we have studied primarily the young have benefited from farm-nonfarm job changes in terms of change in earnings, long-run earnings, and occupational stability. Given these facts, which are probably observable to many farm people over 35, it is little wonder that the mobility rates decline so markedly with age and that there is a net inflow of older workers to agriculture at times.

The labor market also appears to have operated to the disadvantage of the Negroes in agriculture. They have received lower initial gains and lower long-run earnings than whites. However, they do not appear to be subject to any greater occupational instability than whites.

Whereas a majority of the persons who change from farm to nonfarm employment do so by entering the local nonfarm labor market, this opportunity is less available to the farm-employed Negro in the South, because of both local labor market discrimination and the generally limited nature of the smaller labor markets for unskilled labor. As a result, the Negro has lower mobility rates, a higher incidence of migration if he does seek nonfarm employment, and is less likely to return to his area of origin and to farming than the typical white employed in agriculture. This results in more concentration of Negroes in the large cities and in *net* outmovement from farm employment that is as fast or faster than for non-Negroes.

The importance of farm earnings to mobility and future income appears complex. As mentioned, earlier analyses by the authors on the same data could not establish any differential mobility rate related to income. The current analysis may help explain this unexpected finding.

First, the lower income groups do on the average achieve larger first-year gains in income. This is primarily because a given nonfarm income represents a greater gain for those who start the lowest. However, we find that the lower income groups are subject to much greater occupational instability after taking nonfarm employment and partially as a result, they have significantly lower long-run average earnings.

One must conclude that in the case of long-run average earnings and occupational stability that the level of farm earnings must be serving as a proxy for one or more omitted variables. Some characteristics that account for low farm earnings must also account for the occupational instability and lower long-run earnings. One is tempted to name forma education as the factor and it may be this, but it also may be initiative, ambition, and luck. In any case, just raising the income of persons in farming via some subsidy is not likely to improve their experience in the nonfarm labor market and the real factors need careful isolation. Of major importance, however, is recognition that some crucial factors determining farm income apparently are equally crucial in determining nonfarm success, so that change to nonfarm work will not in and of itself solve the low-income problem of most of these individuals.

The mobility rate for mult[illegible]job farm workers is much higher than for persons with farm employment only. But, this nonfarmwork experience does not appear to improve an individual's short-run change in earnings or his long-run earnings following a change to exclusively nonfarmwork. It does, however, apparently increase his occupational stability markedly after mobility, a factor of crucial importance to the probability of moving back into farm employment.

The location of farm employment does not appear important to either income change from mobility or to subsequent occupational stability. It does appear, however, that persons in areas more remote from larger cities have appreciably lower long-run earnings. This suggests that the labor market in or near large cities produces higher earnings for farm people located relatively close to these urban labor markets and who can take advantage of these better local labor markets.

Persons from the areas classified as "low income areas" did not appear to be handicapped in terms of change in earnings from occupational mobility or by greater instability after mobility. This casts some doubt on the theory that the missing factor accounting for much of the unexplained variation is quantity and quality of formal education. By and large most individuals from these "low-income areas" were products of the same educational system and if this or some similar community-wide factor were responsible it should be picked up by the "low-income area" designation. It would appear that our research findings would support the "adverse selectively" for such areas however. We have measured mobility for a period which follows a long history of mobility and migration from such areas. It appears that over time those with certain characteristics, including low farm earnings, tend to be less successful in nonfarm employment and thus return to their low income farm employment. Thus, the process becomes cumulative and areas become "low income areas" as a result of retaining or receiving such persons. Our research shows that the problems of rural "low income areas" is likely to be perpetuated or even increased over time, because so many persons from such areas are those who, for one reason or another, are less likely to succeed—Negroes, older workers, those with low incomes in farming—and who usually will continue to be low income persons if they return to farming.

Finally, long-distance migration, the worry of many rural leaders, does not appear to produce significantly higher financial rewards to the migrants in either the short or long run. It is relatively easy to use average aggregate data to prove that long-distance movement from the South to the North and West should be highly rewarding. The actual measurement of recent experience suggests, however, that it does not work out that way in practice.

On the other hand, the obvious financial attraction of the larger cities was clearly apparent in our data. This leads to two conclusions: (1) that farm people located close to a larger city have a substantial advantage in their quest for income improvement in the nonfarm labor market, and (2) that long-distance migrants are likely to continue to be attracted to large urban areas.

Conclusions and Implications

This report covers what the authors believe to be the most extensive and comprehensive analysis done on occupational mobility and earnings experience through time. It has produced several conclusions at direct variance with conventional theory and wisdom, and it leaves many puzzles and uncertainties.

Conventional theory tells us that occupational mobility should tend to reduce disparities in income between individuals and areas. Moreover, casual observation suggests that the amazing reduction in the farm labor force over the past two decades has worked smoothly and to almost everyone's advantage. And, some conventional wisdom has suggested that most low income farm problems could be solved if the rate of outmovement of farm people could be increased.

Our research results challenge many of these beliefs. First, we find that all other things being equal, mobility rates from farm to nonfarm employment are lower for Negroes, older workers, farm operators, persons from low income rural areas, and persons in areas more remote from larger urban areas. Many of the gross data showing otherwise are either showing migration instead of occuptional mobility and fail to adjust for age distributions and other population characteristics.

Most farmworkers do not migrate far when they change to nonfarm employment. Long-distance migration is primarily a phenomenon of the young and of the southern Negro. And, there is no evidence that long-distance migration pays economic dividends. No relationship between distance migrated and short-run and long-run economic gains was found.

An amazingly high rate of outmobility from farm employment was found in this study, confirming our earlier work and strengthening our belief that the problem of agricultural adjustment is not one which requires a higher rate of gross outmovement. But, a high proportion of the persons taking nonfarm employment in a given year eventually return to farm employment at least for some period, primarily because their expectations of higher nonfarm earnings are not realized. More than 40 percent of those changing from farm to nonfarm employment in the years studied had lower earnings in their nonfarm job than the last year in their farm job. Most of those with such adverse income experience return to farm employment, thus reducing the net outmovement to a fraction of those who try to leave farmwork.

Our analysis of factors associated with change in earnings show that Negroes, those over 45 years old, and those with higher earnings in agriculture receive the least initial gains. The long-run earnings experience, however, shows that Negroes, those over 45, those located further from large cities, and those with the lowest earnings in farm employment tend to have the lowest average long-run earnings after moving to nonfarm employment. Finally, older persons, those without previous nonfarmwork experience, and those with low farm incomes have the greatest occupational instability after changing to nonfarmwork, suffering both from frequent periods without covered employment and from low earnings when employed. Many of these people return to their low-income position in agriculture.

Thus, the mobility process as it has worked would seem to operate to widen the income gap between commercial agriculture and the low income persons in farming. It would also appear to widen the gap between the Negroes and whites who leave farming, and between the income groups after they leave their farm jobs. Thus, much of the low income problems in agriculture may be transferred to rural nonfarm and urban poverty by the mobility process, rather than eliminate it.

There also is little in our results to suggest that the "low income area" problem will be solved by the process of mobility; indeed the contrary appears more likely. The gross occupational mobility in such areas is lower than in more prosperous areas, probably because of the sparsity of local nonfarm employment opportunities in the poorer areas. Moreover, the backmovement into farm employment in low income rural areas is higher than for the more prosperous areas, largely because a majority of the individuals in the low income areas have one or more of the characteristics that reduce the probability of their success in nonfarm employment.

The mobility process out of farm employment might be represented as "Many are called but few are chosen." The problem, then, would appear not to devise policies to increase the number of farm people who try nonfarm employment, but to develop policies whereby the proportion who succeed in their efforts at occupational mobility is substantially increased. If the large backmovement into agriculture came in spite of more rewarding nonfarm employment, then it could be considered a value preference. But, it does not and all indications are that the backmovement is the result of economic experiences. This is not to say that the nonfarm labor market is paying less to the farm-nonfarm movers than their productivity warrants, although it appears likely that discrimination is involved in the case of Negroes and older workers. Of major importance is to find out why farm people with certain characteristics fare so badly in nonfarm employment and then develop policies to either change the characteristics of the individuals or the nature of the labor market they must enter.

Summary of Findings

This is a report of an extensive analysis of the impact of job mobility and migration upon individuals classified as farm wage workers or farm operators under social security coverage. The data are unique in that they make it possible to follow the same individuals over a period of years.

The main conclusions were as follows:

(1) Since many characteristics—race, income, farm status, etc.—are interrelated, gross data on job mobility and migration can be highly misleading. The net effects of these characteristics can be quite different.

(2) Occupational mobility is most common among the young, farm wage workers, whites, and individuals from high income counties located close to SMSA's.

(3) Most persons who moved into agriculture were those who had earlier left for nonfarm jobs. Thus, the backmovers exhibited about the same characteristics as off-farm movers. The backmovement rate was higher relative to outmovement in low income counties than high income counties and for older persons.

(4) Long-distance migration when changing jobs is a function of age, race, sex, county of origin, and farm status before moving. The young, Negroes, males, low income persons, and those from high income counties were the most common long-distance migrants. Surprisingly, people employed on farms closest to SMSA's tended to move further when changing occupations than those located further from our cities.

(5) The average gains in income from leaving farm employment were low, and almost half of all who took nonfarm jobs in a given year made less in their first year of nonfarm employment than in farming. Those who suffered losses in income were most likely to return to agriculture.

(6) Gains in income from changing jobs were associated with the young, whites, the low income persons in agriculture, farm wage workers, living close to an SMSA, and living in a high income county. Those who left farming for government or wholesale and retail trade had smaller gains in income.

(7) Long-term earnings after changing occupations were highest for those with steady nonfarm employment, who were white, had high incomes in farming before leaving farm operations, and who were young when they left farming.

(8) Those who went to cities of over 1 million in population had much higher long-term incomes. Long-distance migrants did not have long-term earnings as high as short-distance movers.

(9) Occupational stability after changing jobs was greatest for the young, persons with higher incomes in farming, who were farm wage workers in agriculture, and came from high income counties. Those who entered wholesale and retail trade industries subsequently had less employment stability.

(10) In general, the mobility process works less well for those who need it the most. It appears that it may result in a widening of income differentials between high and low income farm people and high and low income areas.

(11) In order to improve the incomes of the lowest income groups more local development and

employment opportunities are needed. Most farm people do not move far when they change jobs; but it still pays them best to move to large cities. Until this can be changed we can expect a continuing influx of rural people into large cities and a widening gap between the rural poor and our urban areas.

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Appendix A: Definition of Terms

Many of the terms used in this research report have specific meanings that are associated with the nature of the basic data, Social Security Administration records. Therefore, the precise definitions used are presented to avoid confusion or misunderstanding of the results. They were developed with an eye both to common usage of the terms and our past experience with the data.

The employment status data is carried in the Social Security records in the following code:

	Self-employment indication		*Wage indication*
0	None	0	None
1	Farm	1	Farm
2	Nonfarm	2	Nonfarm
3	Farm and nonfarm	3	Farm and nonfarm

From these codes the following classifications were specified:

Index value[1]	*Employment status*	*Self-employment and wage indication*
0	No coverage	00
2	Farm wage worker (FW)	01
2	Self-employed farm operator (SEF)	10, 11
3	Farm wage worker and nonfarm jobs (multiple-job wage worker)	03, 21, 23
3	Self-employed farmer and self-employed other (multiple-job farm operator)	30, 31, 32. 33
3	Self-employed farmer and nonfarm wages (mutiple-job farm operator)	12, 13
4	Nonfarm wage worker (NFW)	02
4	Nonfarm self-employed (SEO)	20. 22

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[1] Used to compute occupational stability.

Farm employment.—Persons having any category of farm employment during the year in question.

Nonfarm employment.—Persons whose employment was exclusively in nonfarm industries in the year in question.

Multiple-job holder.—Persons with both farm and nonfarm coverage in the year in question.

Occupational mobility.—The movement from some category of farm employment in one year to exclusively nonfarm employment in another year or vice versa.

Off-farm mobility.—A change from some category of farm employment to exclusively nonfarm employment.

Migration.—The distance between the county of farm employment and the county of nonfarm employment, measured by using the Census coordinates for the population center of the county.

In-farm mobility.—A change from exclusively nonfarm employment to some category of farm employment.

Industry of nonfarm employment.—The industry of employment from which the individual obtained the highest earnings during the year. The industry breakdown used and the corresponding Standard Industrial Classification Code as follows:

Industry	*Standard Industrial Classification Code*
Primary industries	02, 07–09. 10–14
Construction	15–17
Manufacturing	19–39
Utilities	40–49
Wholesale and retail trade	50–59
Finance, insurance, and services	60–89
Government	90–98
Unknown	99

The regions were defined as follows:

Northeast.—Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Maryland, Delaware, Pennsylvania, District of Columbia

North Central.—Wisconsin, Michigan, Illinois, Indiana, Ohio, Minnesota, Iowa, Missouri

South.—West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Arkansas, Louisiana, Missouri, Alabama, Georgia, Florida

Plains.—North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Montana, Wyoming, Colorado, New Mexico, Idaho, Utah, Arizona

West.—Washington, Oregon, California, Nevada

Appendix B: Estimates of Net Differences in Off-Farm Mobility Rates

The probability that an individual will move out of farm into exclusively nonfarm employment, P, can be expressed as a function of such attributes as his age, A, his farm employment status, S, his proximity to an employment center, L, etc. Evidence of the probability of off-farm mobility is given by the proportion of farm-employed persons identified by having similar characteristics (for example, a similar age, employment status, and location) who moved out of agriculture. In this analysis, therefore, the observation unit was a *group* of individuals of common characteristics. Because the relation between mobility and the continuous variables, such as age and location, was hypothesized to be nonlinear, all attributes were expressed as sets of "zero-one" variables, each set comprising exhaustive and mutually exclusive classes of the attribute. That is, the hypothesized functional relationship was of the form,

$$P = c + \sum_{i=1} a_i A_i + \sum_{j=1} s_j S_j + \sum_{k=1} l_k L_k + u$$

where A_i, S_j, L_k are "zero-one" variables representing the i^{th} age class, j^{th} employment status group, and k^{th} location class, a_i, s_j and l_k are the probabilities of off-farm mobility corresponding to each of these classes, c is an overall constant, and u is a random disturbance term.

However, the equation cannot be fitted in this form because the observation values corresponding to the classes in each set sum to a common vector, making the moment matrix singular. To avoid singularity, one "zero-one" variable was omitted from each set. This procedure has the effect of transforming the fitted coefficients to estimates of differences between the probability of off-farm mobility of a class of an attribute and of the omitted class of the attribute. Omitting the first variable in each set, the parameters estimated in the above example can be written as $(a_i - a_1)$, $(s_j - s_1)$, and $(l_k - l_1)$. The overall constant becomes an estimate of $(c + a_1 + s_1 + l_1)$, that is, of the mobility rate of the group defined by all the omitted variables in the equation. To obtain the estimated mobility rate of groups defined by any other combination of attributes, the coefficients of the relevant variables should be added to the constant term.

Three different equations were fitted: (i) the off-farm mobility rates of all farm-employed persons in the nation as a function of farm employment status, age, proximity to an employment center, and an index of rurality; (ii) the off-farm mobility rates of farm operators in the South also as a function of employment status, age, proximity, and rurality; and (iii) the off-farm mobility rate of farm wage workers in the South as a function of these variables and of race. Details of the variables are given in the stub of the tables of results of these regressions which follow. Each equation was fitted to data pooled from three pairs of mobility periods, designated "recession," "recovery," and "stability," according to whether the national unemployment rate was rising, falling, or stable.

TABLE 28.—*Results of equation (i): Determinants of off-farm mobility rates among all farm employed persons, the nation, 1957–63* [1]

	Recession periods: 1957–58 and 1960–61	Recovery periods: 1958–59 and 1961–62	Stability periods: 1959–60 and 1962–63
Number of observations	313	312	312
Multiple determination coefficient	.815	.793	.846
Standard error of estimate	10.38	11.43	10.08
Independent variables	Partial regression coefficient: net difference between the mobility rate of the given class and the omitted class of the attribute		
Farm employment status:			
Multiple-job wage worker	33.8**(1.8)	34.4**(2.0)	37.5**(1.8)
Single-job wage worker	−5.9**	−7.4**	−5.2**
Operator with nonfarm wage job	7.9**	9.6**	12.7**
Operator with nonfarm self-employment	9.7**	10.0**	7.4**
Omitted: Single-job wage worker.			
Age:			
25–34	−5.1**(1.7)	−5.0**(1.8)	−6.0**(1.6)
35–44	−7.1**	−8.4**	−9.8**
45 and older	−10.6**	−9.2**	−11.8**
Omitted: Under 25.			
Proximity to nearest SMSA:			
51–100 miles	−1.3 (1.7)	−.9 (1.8)	−.7 (1.6)
101–150 miles	−.4	−1.2	−.1
Over 150 miles	−2.4	−.2	−.9
Omitted: 0 to 50 miles.			
Index of rurality of county:			
Median family income $3,000 or over and under 81 percent population rural	3.6* (1.7)	−1.1 (1.8)	−.8 (1.6)
Median family income $3,000 or over and 81 percent or more rural	1.3	−.4	−.1
Median family income under $3,000 and under 81 percent rural	2.0	.0	2.1
Omitted: Under $3,000 and under 81 percent or more rural.			
Constant term	14.2	17.5	15.6

[1] Estimated from Social Security sample data.

Standard error or regression coefficients shown in parentheses.

** Significant at the .01 level (*.05 level), by a one-tailed t test.

TABLE 29.—*Results of equation (ii): Determinants of off-farm mobility rates among farm operators, the South, 1957–63* [1]

	Recession periods: 1957–58 and 1960–61	Recovery periods: 1958–59 and 1961–62	Stability periods: 1959–60 and 1962–63
Number of observations	36	36	36
Multiple determination coefficient	.931	.916	.916
Standard error of estimate	3.72	4.49	4.71
Independent variables	Partial regression coefficient: net difference between the mobility rate of the given class and the omitted class of the attribute		
Multiple-job status:			
Operators with nonfarm wage job	17.9**(1.5)	21.2**(1.8)	22.3**(1.9)
Operators with nonfarm self-employment	16.5**	15.5**	14.9**
Omitted: Single-job operators.			
Age:			
35–44	−.5 (1.5)	−3.7* (1.8)	−1.9 (1.9)
45 and older	−3.7**	−4.5**	−5.6**
Omitted: Under 35.			
Proximity to nearest SMSA:			
Over 50 miles	−1.4 (1.2)	−.4 (1.5)	−.9 (1.6)
Omitted: 0–50 miles.			
Rurality of county:			
Under 81 percent population rural	3.3**(1.2)	−.6 (1.5)	1.8 (1.6)
Omitted: 81 percent or more population rural.			
Constant term	3.3	7.3	6.1

[1] Estimated from Social Security sample data.

Standard error or regression coefficients shown in parentheses.

** Significant at the .01 level (*.05 level), by a one-tailed t test.

TABLE 30.—*Results of equation (iii): Determinants of off-farm mobility rates among farm wage workers, the South, 1957–63* [1]

	Recession periods: 1957–58 and 1960–61	Recovery periods: 1958–59 and 1961–62	Stability periods: 1959–60 and 1962–63
Number of observations	48	48	48
Multiple determination coefficient	.971	.958	.967
Standard error of estimate	5.19	5.98	5.26
Independent variables	Partial regression coefficient: net difference between the mobility rate of the given class and the omitted class of the attribute		
Multiple-job status:			
Multiple-job wage workers	35.7**(1.5)	34.9**(1.7)	35.0**(1.5)
Omitted: Single-job wage worker.			
Age:			
25–34	−10.6**(1.8)	−7.7**(2.1)	−8.5**(1.9)
35 and older	−15.3**	−12.4**	−13.0**
Omitted: Under 25.			
Race:			
Negro	−7.8**(1.5)	−5.4**(1.7)	−5.9**(1.5)
Omitted: Non-Negro.			
Proximity to nearest SMSA:			
Over 50 miles	−4.2**(1.5)	−3.3* (1.7)	−.6 (1.5)
Omitted class: 0–50 miles.			
Rurality of county:			
Under 81 percent population rural	−.9 (1.5)	−2.3 (1.7)	1.0 (1.5)
Omitted: 81 percent or more population rural.			
Constant term	25.0	22.1	19.3

[1] Estimated from Social Security sample data.

Standard error or regression coefficients shown in parentheses.

** Significant at the .01 level (*.05 level), by a one-tailed t test.

Appendix C

TABLE 31.—*Percentage of in-farm movers who had migrated, by demographic characteristics, and by region* [1]

Region, race, and age	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Northeast					
Race:					
Non-Negro	76.5	12.9	6.4	4.2	100.0
Negro	51.9	12.4	10.7	25.1	100.0
Age:					
Under 25	68.8	13.2	9.2	8.8	100.0
25–34	71.9	13.5	6.8	7.8	100.0
35–44	73.2	13.8	6.8	6.1	100.0
45 and over	79.6	11.4	4.7	4.4	100.0
Total	73.4	12.8	6.9	6.8	100.0
North Central					
Race:					
Non-Negro	73.3	11.4	8.8	6.5	100.0
Negro	50.6	9.4	15.3	24.7	100.0
Age:					
Under 25	67.4	14.5	10.8	7.3	100.0
25–34	70.3	11.6	10.7	7.4	100.0
35–44	72.8	10.4	8.4	8.4	100.0
45 and over	78.5	9.6	6.8	5.2	100.0
Total	72.9	11.4	9.0	6.8	100.0
South					
Race:					
Non-Negro	69.7	12.3	11.3	6.9	100.0
Negro	61.8	13.1	14.2	10.9	100.0
Age:					
Under 25	58.1	15.2	15.7	11.1	100.0
25–34	62.1	13.3	14.9	10.1	100.0
35–44	67.7	12.1	12.2	7.9	100.0
45 and over	76.2	10.6	8.2	5.0	100.0
Total	67.5	12.5	12.1	8.0	100.0
Plains					
Race:					
Non-Negro	57.4	14.5	16.3	11.9	100.0
Negro	53.0	20.5	19.7	6.8	100.0
Age:					
Under 25	47.9	18.3	19.6	14.4	100.0
25–34	50.1	15.0	19.2	15.1	100.0
35–44	60.6	14.0	14.9	10.5	100.0
45 and over	67.1	12.2	12.9	7.8	100.0
Total	57.2	14.8	16.4	11.6	100.0
West					
Race:					
Non-Negro	51.9	14.9	14.3	19.0	100.0
Negro	37.2	14.2	23.0	25.7	100.0
Age:					
Under 25	51.2	14.5	14.9	19.5	100.0
25–34	47.0	15.2	14.0	23.8	100.0
35–44	49.4	14.6	15.1	20.9	100.0
45 and over	56.3	15.1	14.3	14.3	100.0
Total	51.4	14.8	14.6	19.2	100.0
Nation [2]					
Race:					
Non-Negro	65.1	13.1	11.9	10.0	100.0
Negro	57.5	13.8	14.8	13.9	100.0
Age:					
Under 25	57.9	15.4	14.5	12.3	100.0
25–34	60.0	13.6	13.7	12.7	100.0
35–44	64.6	12.8	11.8	10.8	100.0
45 and over	71.9	11.5	9.5	7.1	100.0
Total	64.3	13.2	12.2	10.4	100.0

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[1] Computed from Social Security data. Distance migrated was measured as the direct mileage between center of population in the county in which the mover's major nonfarm job had been located and the center of population in the county of farm employment. Individuals who migrated 50 miles or less were classified as nonmigrants. The proportions in the table are weighted averages of the six mobility periods in the years 1957 to 1963.

[2] The continental United States, excluding Alaska.

TABLE 32.—*Percentage of in-farm movers who had migrated, by farm employment status, and by region* [1]

Region and employment status	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Northeast					
Farm wage work only	68.6	13.9	7.9	9.6	100.0
Farm self-employment only	76.3	16.3	5.0	2.5	100.0
Farm wage work and nonfarm job	71.4	13.6	7.3	7.7	100.0
Farm self-employment and nonfarm wage job	84.5	8.5	5.3	1.3	100.0
Farm self-employment and nonfarm self-employment	88.7	6.0	4.5	0.8	100.0
Total	73.4	12.8	6.9	6.8	100.0
North Central					
Farm wage work only	65.5	13.0	10.9	10.6	100.0
Farm self-employment only	74.6	14.0	8.8	2.6	100.0
Farm wage work and nonfarm job	65.8	13.0	11.1	10.1	100.0
Farm self-employment and nonfarm wage job	82.6	9.3	5.9	2.3	100.0
Farm self-employment and nonfarm self-employment	89.9	4.5	3.9	1.7	100.0
Total	72.9	11.4	9.0	6.8	100.0
South					
Farm wage work only	60.1	13.3	14.8	11.9	100.0
Farm self-employment only	70.2	15.3	10.9	3.6	100.0
Farm wage work and nonfarm job	61.1	13.7	14.4	10.9	100.0
Farm self-employment and nonfarm wage job	78.7	11.1	7.7	2.6	100.0
Farm self-employment and nonfarm self-employment	88.4	5.1	5.3	1.3	100.0
Total	67.5	12.5	12.1	8.0	100.0
Plains					
Farm wage work only	48.9	18.5	18.5	14.3	100.0
Farm self-employment only	70.2	14.1	12.3	3.4	100.0
Farm wage work and nonfarm job	48.5	15.8	20.3	15.3	100.0
Farm self-employment and nonfarm wage job	71.9	12.7	10.0	5.4	100.0
Farm self-employment and nonfarm self-employment	89.5	6.4	2.8	1.3	100.0
Total	57.2	14.8	16.4	11.6	100.0
West					
Farm wage work only	48.4	13.1	14.3	24.2	100.0
Farm self-employment only	65.3	18.1	12.5	4.2	100.0
Farm wage work and nonfarm job	48.9	15.5	15.7	19.9	100.0
Farm self-employment and nonfarm wage job	74.6	17.8	4.2	3.4	100.0
Farm self-employment and nonfarm self-employment	83.2	6.1	4.6	6.1	100.0
Total	51.4	14.8	14.6	19.2	100.0
Nation [2]					
Farm wage work only	57.3	14.5	13.9	14.4	100.0
Farm self-employment only	71.8	14.8	10.3	3.2	100.0
Farm wage work and nonfarm job	57.8	14.4	14.4	13.4	100.0
Farm self-employment and nonfarm wage job	78.8	10.9	7.3	3.1	100.0
Farm self-employment and nonfarm self-employment	88.8	5.4	4.2	1.6	100.0
Total	64.3	13.2	12.2	10.4	100.0

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[1] Computed from Social Security data. Distance migrated was measured as the direct mileage between center of population in the county in which the mover's major nonfarm job had been located and the center of population in the county of farm employment. Individuals who migrated 50 miles or less were classified as nonmigrants. The proportions in the table are weighted averages of the six mobility periods in the years 1957 to 1963.

[2] The continental United States, excluding Alaska.

TABLE 33.—*Percentage of in-farm movers who had migrated, by total earnings while farm employed, the nation* [1, 2]

Total earnings while farm employed	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Under $500	56.4	14.3	15.4	13.9	100.0
$500–$999	58.6	14.6	13.4	13.4	100.0
$1,000–$1,999	63.1	13.0	12.7	11.3	100.0
$2,000–$2,999	64.9	14.0	11.6	9.5	100.0
$3,000–$3,999	70.0	11.6	11.0	7.4	100.0
$4,000–$4,999	73.5	11.6	9.4	5.6	100.0
$5,000–$7,499	77.9	11.3	7.3	3.4	100.0
Over $7,499	77.3	9.8	7.1	5.8	100.0
Total	64.3	13.2	12.2	10.4	100.0

[1] Computed from Social Security data. Distance migrated was measured as the direct mileage between center of population in the county in which the mover's major nonfarm job had been located and the center of population in the county of farm employment. Individuals who migrated 50 miles or less were classified as nonmigrants. The proportions in the table are weighted averages of the six mobility periods in the years 1957 to 1963.

[2] The continental United States, excluding Alaska.

TABLE 34.—*Percentage of in-farm movers who had migrated, by median family income and percent commercial farms in the county of origin, and by region* [1]

Region, income, and percent commercial farms	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Northeast					
Median family income:					
Under $3,500	.....	.....	.....	.....	.....
$3,500 and over	73.4	12.8	6.9	6.8	100.0
Percent commercial farms:					
0.0 to 9.9	69.6	16.1	8.9	5.4	100.0
10.0 to 29.9	72.7	14.1	7.3	5.9	100.0
30.0 and over	73.8	12.0	6.7	7.5	100.0
Total	73.4	12.8	6.9	6.8	100.0
North Central					
Median family income:					
Under $3,500	63.6	17.0	14.2	5.1	100.0
$3,500 and over	73.8	10.8	8.4	7.0	100.0
Percent commercial farms:					
0.0 to 9.9	70.2	13.2	11.1	5.5	100.0
10.0 to 29.9	74.2	10.8	7.9	7.2	100.0
30.0 and over	72.0	11.7	9.8	6.7	100.0
Total	72.9	11.4	9.0	6.8	100.0
South					
Median family income:					
Under $3,500	71.2	13.3	11.1	4.4	100.0
$3,500 and over	63.6	11.6	13.1	11.7	100.0
Percent commercial farms:					
0.0 to 9.9	73.9	12.6	10.3	3.3	100.0
10.0 to 29.9	67.3	12.3	12.6	7.8	100.0
30.0 and over	50.2	12.7	15.6	21.5	100.0
Total	67.5	12.5	12.1	8.0	100.0
Plains					
Median family income:					
Under $3,500	60.8	18.6	13.9	6.7	100.0
$3,500 and over	56.3	14.0	17.0	12.7	100.0
Percent commercial farms:					
0.0 to 9.9	64.0	16.5	12.9	6.6	100.0
10.0 to 29.9	63.1	14.8	14.1	8.0	100.0
30.0 and over	52.5	14.6	18.4	14.6	100.0
Total	57.2	14.8	16.4	11.6	100.0

TABLE 34.—*Percentage of in-farm movers who had migrated, by median family income and percent commercial farms in the county of origin, and by region* [1]—Continued

Region, income, and percent commercial farms	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
West					
Median family income:					
Under $3,500	.....	.....	.....	.....	.....
$3,500 and over	51.4	14.8	14.6	19.2	100.0
Percent commercial farms:					
0.0 to 9.9	.....	.....	.....	.....	.....
10.0 to 29.9	60.6	13.4	11.2	14.8	100.0
30.0 and over	48.7	15.3	15.6	20.4	100.0
Total	51.4	14.8	14.6	19.2	100.0
Nation [2]					
Median family income:					
Under $3,500	68.1	14.9	12.0	5.0	100.0
$3,500 and over	63.4	12.8	12.2	11.6	100.0
Percent commercial farms:					
0.0 to 9.9	72.0	13.2	10.7	4.2	100.0
10.0 to 29.9	68.4	12.7	10.7	8.2	100.0
30.0 and over	58.3	13.7	13.9	14.2	100.0
Total	64.3	13.2	12.2	10.4	100.0

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[1] Computed from Social Security data. Distance migrated was measured as the direct mileage between center of population in the county in which the mover's major nonfarm job had been located and the center of population in the county of farm employment. Individuals who migrated 50 miles or less were classified as nonmigrants. The proportions in the table are weighted averages of the six mobility periods in the years 1957 to 1963.

[2] The continental United States, excluding Alaska.

TABLE 35.—*Percentage of in-farm movers who had migrated by proximity to employment centers, and by region* [1]

Region, and proximity to employment centers [2]	Did not migrate	Distance migrated			All movers
		51–150 miles	151–500 miles	Over 500 miles	
Northeast					
0 to 50 miles	72.5	13.4	7.5	6.6	100.0
51 to 100 miles	72.9	11.8	6.0	9.3	100.0
101 to 150 miles	74.3	12.2	4.1	9.5	100.0
Over 150 miles	84.9	9.5	4.8	0.8	100.0
Total	73.4	12.8	6.9	6.8	100.0
North Central					
0 to 50 miles	68.5	13.3	10.0	8.3	100.0
51 to 100 miles	82.2	7.6	6.4	3.9	100.0
101 to 150 miles	76.9	11.2	8.7	3.4	100.0
Over 150 miles	48.0	2.0	20.0	30.0	100.0
Total	72.9	11.4	9.0	6.8	100.0
South					
0 to 50 miles	56.6	14.8	16.9	11.7	100.0
51 to 100 miles	79.5	9.7	6.9	4.0	100.0
101 to 150 miles	76.4	12.5	8.3	2.9	100.0
Over 150 miles	.....	.....	.....	.....	.....
Total	67.5	12.5	12.1	8.0	100.0
Plains					
0 to 50 miles	46.2	15.5	19.4	19.0	100.0
51 to 100 miles	65.4	13.6	14.8	6.2	100.0
101 to 150 miles	66.7	11.7	14.3	7.3	100.0
Over 150 miles	67.7	16.8	12.7	2.8	100.0
Total	57.2	14[illegible]	16.4	11.6	100.0

TABLE 35.—*Percentage of in-farm movers who had migrated by proximity to employment centers, and by region* [1]—Continued

Region, and proximity to employment centers[2]	Did not migrate	Distance migrated: 51–150 miles	Distance migrated: 151–500 miles	Distance migrated: Over 500 miles	All movers
West					
0 to 50 miles	47.6	16.2	15.5	20.7	100.0
51 to 100 miles	61.3	11.0	8.1	19.5	100.0
101 to 150 miles	62.6	13.7	7.8	15.9	100.0
Over 150 miles	46.4	13.0	29.0	11.6	100.0
Total	51.4	14.8	14.6	19.2	100.0
Nation [3]					
0 to 50 miles	58.3	14.6	13.9	13.2	100.0
51 to 100 miles	74.9	10.3	8.4	6.5	100.0
101 to 150 miles	70.7	12.1	10.0	7.3	100.0
Over 150 miles	63.7	14.6	15.7	6.0	100.0
Total	64.3	13.2	12.2	10.4	100.0

[1] Computed from Social Security data. Distance migrated was measured as the direct mileage between center of population in the county in which the mover's major nonfarm job had been located and the center of population in the county of farm employment. Individuals who migrated 50 miles or less were classified as nonmigrants. The proportions in the table are weighted averages of the six mobility periods in the years 1957 to 1963.

[2] Proximity to an employment center was measured as the distance of the county of farm employment from the nearest SMSA.

[3] The continental United States, excluding Alaska.

ACKNOWLEDGMENTS

This research would not have been possible without the substantial support of Mr. Robert E. Graham, chief, Regional Economics Division, Office of Business Economics, Department of Commerce; and Mr. Lowell Ashby, Assistant Chief, Regional Economics Division, whose research unit obtained the data from the Social Security Administration, processed it as we requested, and provided us with the nearly finished statistics. Special credit in this regard should be given to Mr. David Hirschberg, economist, Regional Economics Division, who performed the major task of collecting the data, supervised the programming and running, and carried out the numerous other tasks that are involved in such a massive data analysis problem.

Many helpful comments and ideas came from the staff of the Commission and especially from Dr. Keith Bryant and the executive director, Dr. C. E. Bishop. The authors, of course, were responsible for the final form and content of the analysis and any errors therein.

Appendix D

TABLE 36.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the nation, 1957–58*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.0829	0.2880	0.0775	0.2784	170.69842097

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	26.8083	14.7772	......	1.8142	0.066
Race: Negro	−30.1372	9.0656	−0.05057	−3.3243	0.001
Omitted: White.					
Age:					
25–34	7.4144	7.7340	0.01721	0.9587	0.340
35–44	0.4277	8.0945	0.00096	0.0528	0.912
45 and over	−36.0905	7.4988	−0.09302	−4.8129	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	21.6560	10.7789	0.03024	2.0091	0.042
101–150 miles	18.4190	13.4504	0.02060	1.3694	0.167
151 miles or more	2.4613	6.8605	0.00563	0.3588	0.719
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	2.2545	17.1308	0.00202	0.1316	0.865
Construction	1.9682	8.7361	0.00393	0.2253	0.806
Utilities	−18.4683	12.2327	−0.02413	−1.5098	0.127
Wholesale and retail trades	−15.3871	7.2333	−0.03963	−2.1273	0.032
Financial services	4.9726	8.8868	0.00973	0.5595	0.583
Government	−54.8863	12.5804	−0.07061	−4.3629	<0.0005
Military and unknown	−21.9350	16.5811	−0.02053	−1.3229	0.182
Omitted: Manufacturing.					

TABLE 36.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the nation, 1957–58*—Continued

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.0829	0.2880	0.0775	0.2784	170.69842097

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Location relative to SMSA:					
51–100 miles	−1.3327	6.4509	−0.00323	−0.2066	0.818
101–150 miles	−11.7015	9.2512	−0.01923	−1.2649	0.203
Over 150 miles	−12.1189	11.1145	−0.01649	−1.0904	0.275
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	15.1751	13.9674	0.03268	1.0865	0.277
Multiple-job farm wage worker	35.7746	12.7771	0.09955	2.7999	0.005
Multiple-job farm operator-NFW	−17.0104	14.2554	−0.03132	−1.1933	0.231
Multiple-job farm operator-SEO	85.7770	15.3299	0.12884	5.5954	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
\$1,200 to \$1,799	−21.0883	7.9821	−0.04338	−2.6420	0.008
\$1,800 to \$2,399	−29.1567	9.0660	−0.05237	−3.2161	0.001
\$2,400 to \$2,999	−47.6467	10.1094	−0.07588	−4.7131	<0.0005
\$3,000 and over	−94.7957	7.8264	−0.21842	−12.1123	<0.0005
Omitted: Under \$1,200					

TABLE 37.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the nation, 1958–59*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1378	0.3712	0.1325	0.3640	167.90897615

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	65.8200	13.5038	......	4.8742	<0.0005
Race: Negro	−40.4695	9.6366	−0.06264	−4.1996	<0.0005
Omitted: White.					
Age:					
25–34	15.2595	7.6061	0.03483	2.0062	0.042
35–44	−9.9613	8.0811	−0.02147	−1.2327	0.215
45 and over	−29.6901	7.5115	−0.07476	−3.9526	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	−2.2925	9.9502	−0.00343	−0.2304	0.803
101–150 miles	−4.7198	12.2363	−0.00571	−0.3857	0.701
151 miles or more	−5.3388	6.8776	−0.01197	−0.7763	0.444
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−50.2858	16.9076	−0.04468	−2.9742	0.003
Construction	−17.9118	8.5415	−0.03494	−2.0970	0.034
Utilities	−23.3486	12.6710	−0.02843	−1.8427	0.062
Wholesale and retail trades	−40.0790	7.2445	−0.09694	−5.5323	<0.0005
Financial services	−27.8067	8.7131	−0.05325	−3.1914	0.002
Government	−89.0595	11.1803	−0.12911	−7.9657	<0.0005
Military and unknown	−31.0366	15.7233	−0.02993	−1.9739	0.046
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−21.9674	6.4265	−0.05246	−3.4183	0.001
101–150 miles	−44.7658	9.4476	−0.07113	−4.7383	<0.0005
Over 150 miles	−28.7591	11.0000	−0.03886	−2.6145	0.009
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	35.4582	12.7777	0.07551	2.7750	0.006
Multiple-job farm wage worker	60.5585	11.3685	0.16737	5.3268	<0.0005
Multiple-job farm operator-NFW	−7.8093	12.6170	−0.01515	−0.6190	0.544
Multiple-job farm operator-SEO	28.7761	14.5102	0.04115	1.9832	0.045
Omitted: Single-job farm operator.					
Earnings in farming:					
\$1,200 to \$1,799	−16.9362	7.8662	−0.03447	−2.1530	0.030
\$1,800 to \$2,399	−34.1115	9.3146	−0.05846	−3.6621	<0.0005
\$2,400 to \$2,999	−58.2377	10.6483	−0.08631	−5.4692	<0.0005
\$3,000 and over	−104.8448	7.8848	−0.23552	−13.2970	<0.0005
Omitted: Under \$1,200					

TABLE 38.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the nation, 1959–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1009	0.3177	0.0958	0.3095	146.09750407

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	51.4228	12.3388	......	4.1676	<0.0005
Race:					
Negro	−33.6132	7.4258	−0.06782	−4.5266	<0.0005
Omitted: White.					
Age:					
25–34	3.7580	6.4157	0.00990	0.5857	0.565
35–44	−7.8934	6.7268	−0.02022	−1.1734	0.239
45 and over	−26.0721	6.2745	−0.07532	−4.1553	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	12.5390	8.3303	0.02220	1.5052	0.128
101–150 miles	0.6634	9.7849	0.00100	0.0678	0.903
151 miles or more	8.4617	5.6633	0.02280	1.4941	0.131
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−43.8585	13.0926	−0.05025	−3.3499	0.001
Construction	−31.3733	7.4319	−0.06966	−4.2214	<0.0005
Utilities	3.9855	10.5441	0.00579	0.3780	0.706
Wholesale and retail trades	−34.6441	6.1262	−0.09873	−5.6550	<0.0005
Financial services	−25.1052	7.3957	−0.05649	−3.3946	0.001
Government	−73.6891	9.9786	−0.11662	−7.3847	<0.0005
Military and unknown	9.1071	11.4936	0.01220	0.7924	0.434
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−25.1118	5.4075	−0.07042	−4.6439	<0.0005
101–150 miles	−33.6544	8.1188	−0.06148	−4.1452	<0.0005
Over 150 miles	−18.2332	9.4624	−0.02831	−1.9269	0.051
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	30.9234	11.9950	0.07367	2.5780	0.010
Multiple-job farm wage worker	44.4549	10.7807	0.14047	4.1236	<0.0005
Multiple-job farm operator-NFW	−5.3685	12.0580	−0.01119	−0.4452	0.660
Multiple-job farm operator-SEO	21.3786	13.8716	0.03187	1.5412	0.119
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−4.4422	6.8146	−0.01051	−0.6519	0.522
$1,800 to $2,399	−19.1404	7.6569	−0.03978	−2.4997	0.012
$2,400 to $2,999	−43.7045	8.6392	−0.07964	−5.0589	<0.0005
$3,000 and over	−71.8155	6.6572	−0.19383	−10.7877	<0.0005
Omitted Under $1,200.					

TABLE 39.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the Northeast, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1238	0.3519	0.1122	0.3350	134.09620393

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	78.4490	19.7237	......	3.9774	<0.0005
Race:					
Negro	−46.0133	10.3753	−0.09989	−4.4349	<0.0005
Omitted: White.					
Age:					
25–34	12.3001	8.6222	0.03614	1.4266	0.150
35–44	−0.2418	9.7919	−0.00063	−0.0247	0.929
45 and over	−27.4361	9.0139	−0.08226	−3.0438	0.003
Omitted: Under 25					
Distance migrated:					
51–100 miles	2.7089	11.8358	0.00503	0.2289	0.804
101–150 miles	−12.3871	16.3260	−0.01654	−0.7587	0.454
151 miles or more	1.3958	9.2161	0.00340	0.1515	0.853
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−19.7211	18.3902	−0.02393	−1.0724	0.284
Construction	−20.4928	10.5028	−0.04643	−1.9512	0.048
Utilities	31.0580	15.6659	0.04491	1.9826	0.045
Wholesale and retail trades	−29.6935	8.1430	−0.09154	−3.6465	<0.0005

TABLE 39.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the Northeast, 1957–60*—Continued

Multiple Correlation Coefficients				
R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1238	0.3519	0.1122	0.3350	134.09620393

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Financial services	−7.4412	10.0304	−0.01799	−0.7419	0.465
Government	−51.4838	14.4141	−0.08303	−3.5718	<0.0005
Military and unknown	−34.8486	23.0669	−0.03368	−1.5108	0.127
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−23.2185	8.6334	−0.05926	−2.6894	0.007
101–150 miles	−25.9852	18.5865	−0.03047	−1.3981	0.158
Over 150 miles	−40.0894	15.8304	−0.05530	−2.5324	0.011
Omitted: Under 51 miles:					
Farm employment status:					
Single-job farm wage worker	−14.9850	19.1402	−0.04193	−0.7829	0.440
Multiple-job farm wage worker	10.3360	17.9938	0.03482	0.5744	0.573
Multiple-job farm operator-NFW	−42.9501	20.4446	−0.08225	−2.1008	0.034
Multiple-job farm operator-SEO	−8.9045	22.4571	−0.01309	−0.3965	0.693
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−21.3037	9.5916	−0.05270	−2.2211	0.025
$1,800 to $2,399	−30.6296	11.0826	−0.06592	−2.7638	0.006
$2,400 to $2,999	−47.7460	11.6228	−0.09685	−4.1079	<0.0005
$3,000 and over	−90.7650	9.1226	−0.26621	−9.9495	<0.0005
Omitted: Under $1,200.					

TABLE 40.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the North Central, 1957–60*

Multiple Correlation Coefficients				
R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1286	0.3586	0.1212	0.3481	182.89818771

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	74.6362	16.2456	......	4.5942	<0.0005
Race:					
Negro	−16.0288	23.8774	−0.01174	−0.6713	0.509
Omitted: White.					
Age:					
25–34	−3.1204	10.2655	−0.00642	−0.3040	0.755
35–44	−10.1588	10.5139	−0.02076	−0.9662	0.336
45 and over	−38.5531	9.9783	−0.09129	−3.8637	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	39.2858	13.8383	0.04975	2.8389	0.005
101–150 miles	28.5432	16.8048	0.02971	1.6985	0.085
151 miles or more	−15.6810	10.2189	−0.02792	−1.5345	0.121
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−52.3933	23.9878	−0.03869	−2.1842	0.027
Construction	−20.0370	11.4007	−0.03387	−1.7575	0.075
Utilities	−33.8106	15.3315	−0.04058	−2.2053	0.026
Wholesale and retail trades	−46.4859	9.1734	−0.10342	−5.0675	<0.0005
Financial services	−27.6239	11.4548	−0.04734	−2.4116	0.015
Government	−106.9961	14.8983	−0.13678	−7.1818	<0.0005
Military and unknown	−37.1000	18.6868	−0.03591	−1.9854	0.045
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−19.8481	8.0166	−0.04465	−2.4759	0.013
101–150 miles	−35.4293	11.3314	−0.05599	−3.1266	0.002
Over 150 miles	40.7367	36.3763	0.01945	1.1199	0.262
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	21.1809	15.9014	0.03706	1.3320	0.179
Multiple-job farm wage worker	57.4442	13.3302	0.14706	4.3093	<0.0005
Multiple-job farm operator-NFW	−9.4003	14.0562	−0.01960	−0.6688	0.511
Multiple-job farm operator-SEO	61.4281	16.1524	0.09330	3.8030	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−22.3785	10.4656	−0.04225	−2.1383	0.031
$1,800 to $2,399	−38.8793	11.7803	−0.06440	−3.3004	0.001
$2,400 to $2,999	−69.5370	13.5844	−0.09894	−5.1189	<0.0005
$3,000 and over	−99.2537	9.7575	−0.22827	−10.1721	<0.0005
Omitted: Under $1,200.					

TABLE 41.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the South, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.0958	0.3095	0.0875	0.2958	168.60522048

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	77.5767	16.4946	....	4.7032	<0.0005
Race:					
Negro	−28.3360	7.9069	−0.07234	−3.5837	<0.0005
Omitted: White.					
Age:					
25–34	19.6980	9.8674	0.04439	1.9963	0.043
35–44	−0.5471	10.0291	−0.00126	−0.0545	0.911
45 and over	−38.0331	9.3784	−0.10203	−4.0554	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	11.7194	12.6404	0.01760	0.9271	0.357
101–150 miles	−11.0651	16.5580	−0.01247	−0.6683	0.511
151 miles or more	17.2241	8.9277	0.03803	1.9293	0.051
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−0.2009	20.0620	−0.00019	−0.0100	0.940
Construction	0.6444	10.5425	0.00133	0.0611	0.907
Utilities	−0.2091	16.7280	−0.00024	−0.0125	0.938
Wholesale and retail trades	−25.9647	9.0193	−0.06501	−2.8788	0.004
Financial services	−9.4513	10.9512	−0.01842	−0.8630	0.393
Government	−77.9476	13.8110	−0.11601	−5.6439	<0.0005
Military and unknown	25.4848	18.1803	0.02723	1.4018	0.157
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−25.4054	7.1411	−0.07006	−3.5576	0.001
101–150 miles	−64.7478	13.8777	−0.08807	−4.6656	<0.0005
Over 150 miles	−76.8391	169.1937	−0.00832	−0.4541	0.654
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−4.5251	15.4581	−0.00971	−0.2927	0.763
Multiple-job farm wage worker	1.9411	14.1144	0.00550	0.1375	0.861
Multiple-job farm operator-NFW	−11.6770	15.1281	−0.02485	−0.7653	0.450
Multiple-job farm operator-SEO	6.6790	16.8775	0.01042	0.3602	0.718
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−12.0307	9.3153	−0.02595	−1.2915	0.193
$1,800 to $2,399	−37.3157	10.8726	−0.06868	−3.4321	0.001
$2,400 to $2,999	−60.3454	13.3455	−0.08879	−4.5218	<0.0005
$3,000 and over	−105.0012	10.9289	−0.20997	−9.6077	<0.0005
Omitted Under $1,200.					

TABLE 42.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the Plains, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1202	0.3466	0.1122	0.3349	156.85921602

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	7.4794	17.3197	......	0.4318	0.669
Race:					
Negro	−38.8193	13.9919	−0.05119	−2.7744	0.006
Omitted: White.					
Age:					
25–34	9.5303	8.7482	0.02320	1.0894	0.276
35–44	−22.3480	9.1295	−0.05214	−2.4479	0.014
45 and over	−18.9873	8.3339	−0.05114	−2.2783	0.022
Omitted: Under 25.					
Distance migrated:					
51–100 miles	3.3920	11.5015	0.00546	0.2949	0.761
101–150 miles	14.8668	12.7298	0.02164	1.1679	0.241
151 miles or more	9.0840	7.3557	0.02461	1.2350	0.214
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−24.1504	20.1490	−0.02290	−1.1986	0.229
Construction	−21.4296	10.2262	−0.04919	−2.0956	0.034
Utilities	−25.5792	14.5418	−0.03538	−1.7590	0.075
Wholesale and retail trades	−23.7544	9.2669	−0.06450	−2.5634	0.010
Financial services	−19.7526	10.6712	−0.04247	−1.8510	0.061

TABLE 42.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the Plains, 1957–60*—Continued

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1202	0.3466	0.1122	0.3349	156.85921602

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Government	−60.6909	12.9611	−0.10048	−4.6825	<0.0005
Military and unknown	−6.1757	15.1733	−0.00814	−0.4070	0.686
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−2.2241	7.8695	−0.00563	−0.2826	0.769
101–150 miles	−7.5419	9.6065	−0.01531	−0.7851	0.438
Over 150 miles	−6.7026	8.5506	−0.01564	−0.7839	0.439
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	51.9969	15.6720	0.11612	3.3178	0.001
Multiple-job farm wage worker	72.1814	13.8280	0.21161	5.2200	<0.0005
Multiple-job farm operator-NFW	−12.2425	15.8383	−0.02300	−0.7730	0.446
Multiple-job farm operator-SEO	96.1862	17.7672	0.13927	5.4137	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−7.6865	9.0273	−0.01718	−0.8515	0.399
$1,800 to $2,399	−18.6014	10.6307	−0.03453	−1.7498	0.076
$2,400 to $2,999	−47.3826	11.0845	−0.08419	−4.2747	<0.0005
$3,000 and over	−95.1821	9.3229	−0.22355	−10.2095	<0.0005
Omitted: Under $1,200.					

TABLE 43.—*Results of regression equation of factors associated with short-run changes in earnings of mobile persons, the West, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.0805	0.2837	0.0706	0.2657	151.37291189

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	−54.1271	25.0585	......	−2.1600	0.029
Race:					
Negro	−26.1695	20.2733	−0.02606	−1.2908	0.194
Omitted: White.					
Age:					
25–34	5.0769	8.7316	0.01388	0.5814	0.568
35–44	1.0325	9.3687	0.00257	0.1102	0.877
45 and over	−36.0344	8.7591	−0.09862	−4.1139	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.7860	11.6994	0.00138	0.0672	0.903
101–150 miles	−1.5485	13.5025	−0.00083	−0.0406	0.919
151 miles or more	−3.2388	7.3501	−0.00948	−0.4406	0.663
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−41.1354	17.2879	−0.04971	−2.3794	0.017
Construction	−10.9417	10.7024	−0.02324	−1.0224	0.308
Utilities	−16.4138	13.7992	−0.02546	−1.1895	0.232
Wholesale and retail trades	−24.7573	8.3114	−0.07166	−2.9786	0.003
Financial services	−6.0497	10.2651	−0.01351	−0.5893	0.563
Government	−45.0977	18.2778	−0.05110	−2.4673	0.013
Military and unknown	3.4565	21.4937	0.00333	0.1608	0.847
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−1.4401	8.8627	−0.00332	−0.1625	0.846
101–150 miles	−18.7284	10.4775	−0.03650	−1.7875	0.070
Over 150 miles	−4.7985	12.1902	−0.00800	−0.3936	0.695
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	125.7032	24.4884	0.32337	5.1332	<0.0005
Multiple-job farm wage worker	137.8809	23.5478	0.39117	5.8554	<0.0005
Multiple-job farm operator-NFW	46.3204	30.5842	0.04574	1.5145	0.126
Multiple-job farm operator-SEO	137.6149	30.6463	0.13475	4.4904	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−13.3131	9.9925	−0.02914	−1.3323	0.179
$1,800 to $2,399	−17.4192	11.0322	−0.03460	−1.5789	0.110
$2,400 to $2,999	−27.2664	12.8460	−0.04544	−2.1226	0.032
$3,000 and over	−70.4308	9.0965	−0.18888	−7.7426	<0.0005
Omitted: Under $1,200.					

TABLE 44.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the nation, 1957–58*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4391	0.6627	0.4357	0.6601	171.88661985

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	−94.6139	17.5483	......	−5.3916	<0.0005
Race:					
Negro	−57.5662	9.1289	−0.07503	−6.3059	<0.0005
Omitted: White.					
Age:					
25–34	5.4264	7.7970	0.00978	0.6960	0.494
35–44	−8.1731	8.1810	−0.01418	−0.9990	0.319
45 and over	−51.0221	7.7039	−0.10214	−6.6229	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	28.1117	10.8540	0.03049	2.5900	0.009
101–150 miles	20.8497	13.5446	0.01811	1.5393	0.119
151 miles or more	−0.7959	6.9094	−0.00141	−0.1152	0.874
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	68.4861	17.2536	0.04775	3.9694	<0.0005
Construction	−17.7643	8.7971	−0.02758	−2.0193	0.041
Utilities	−13.7306	12.3202	−0.01394	−1.1145	0.264
Wholesale and retail trades	−15.0900	7.2948	−0.03019	−2.0686	0.036
Financial Services	8.7259	8.9604	0.01326	0.9738	0.332
Government	−31.0770	12.6709	−0.03105	−2.4526	0.014
Military and unknown	2.2746	16.6971	0.00165	0.1362	0.862
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−22.4563	6.4972	−0.04223	−3.4563	0.001
101–150 miles	−18.8230	9.3169	−0.02403	−2.0203	0.041
Over 150 miles	−12.0017	11.1940	−0.01269	−1.0722	0.284
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−28.3610	14.1347	−0.04744	−2.0065	0.042
Multiple-job farm wage worker	−23.9332	12.9974	−0.05173	−1.8414	0.062
Multiple-job farm operator-NFW	−65.1783	14.4894	−0.09322	−4.4983	<0.0005
Multiple-job farm operator-SEO	−80.5220	15.4498	0.09395	5.2118	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
\$1,200 to \$1,799	38.4010	8.0633	0.06136	4.7624	<0.0005
\$1,800 to \$2,399	80.6075	9.1439	0.11245	8.8154	<0.0005
\$2,400 to \$2,999	119.2582	10.2489	0.14753	11.6362	<0.0005
\$3,000 and over	267.7973	7.9747	0.47928	33.5810	<0.0005
Omitted: Under \$1,200.					
Experience: % of years of covered employment.	360.3612	12.0913	0.36664	29.8034	<0.0005

TABLE 45.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the nation, 1958–59*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4217	0.6494	0.4180	0.6466	170.87063268

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	−85.8647	17.3545	......	−4.9477	<0.0005
Race:					
Negro	−62.2827	9.8072	−0.07759	−6.3507	<0.0005
Omitted: White.					
Age:					
25–34	8.4223	7.7480	0.01547	1.0870	0.277
35–44	−13.7034	8.2489	−0.02377	−1.6612	0.093
45 and over	−41.5638	7.7631	−0.08424	−5.3540	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	−11.3878	10.1261	−0.01372	−1.1246	0.260
101-150 miles	−7.7280	12.4529	−0.00752	−0.6206	0.542
151 miles or more	−6.2481	6.9994	−0.01127	−0.8927	0.376
Omitted: Under 51 miles.					

TABLE 45.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the nation, 1958–59*—Continued

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4217	0.6494	0.4180	0.6466	170.87063268

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Industry of nonfarm employment:					
Mining	−35.9894	17.2087	−0.02574	−2.0914	0.034
Construction	−28.3530	8.6925	−0.04452	−3.2618	0.001
Utilities	−13.5449	12.8978	−0.01328	−1.0502	0.294
Wholesale and retail trades	−35.0845	7.3793	−0.06830	−4.7545	<0.0005
Financial services	−25.0616	8.8778	−0.03863	−2.8230	0.005
Government	−55.7744	11.3840	−0.06508	−4.8994	<0.0005
Military and unknown	55.8430	16.0024	0.04334	3.4897	0.001
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−39.6595	6.5399	−0.07622	−6.0643	<0.0005
101–150 miles	−35.9258	9.6143	−0.04594	−3.7367	<0.0005
Over 150 miles	−26.4380	11.1941	−0.02875	−2.3618	0.017
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−33.7042	13.0355	−0.05777	−2.5856	0.010
Multiple-job farm wage worker	−11.5865	11.6295	−0.02577	−0.9963	0.321
Multiple-job farm operator-NFW	−43.6805	12.9208	−0.06820	−3.3806	0.001
Multiple-job farm operator-SEO	76.3473	14.7665	0.08786	5.1703	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	44.6551	8.0382	0.07315	5.5554	<0.0005
$1,800 to $2,399	67.6451	9.5034	0.09331	7.1180	<0.0005
$2,400 to $2,999	107.7351	10.8782	0.12851	9.9038	<0.0005
$3,000 and over	252.8051	9.0882	0.45708	31.2563	<0.0005
Omitted: Under $1,200.					
Experience: % of years of covered employment.	374.8113	12.6602	0.36911	29.6056	<0.0005

TABLE 46.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the nation, 1959–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4580	0.6768	0.4548	0.6744	167.98043234

Factor	Std. errors of coefficients	Regression coefficients	Beta weights	TB	Sig.
Constant	19.3982	−88.2681	......	−4.5503	<0.0005
Race:					
Negro	8.5381	−48.2853	−0.06579	−5.6552	<0.0005
Omitted: White.					
Age:					
25–34	7.3878	3.3698	0.00600	0.4561	0.653
35–44	7.7580	−2.2055	−0.00382	−0.2843	0.768
45 and over	7.3431	−46.8807	−0.09147	−6.3843	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	9.5801	9.8408	0.01177	1.0272	0.305
101–150 miles	11.2509	−8.1330	−0.00825	−0.7229	0.477
151 miles or more	6.5118	6.7194	0.01223	1.0319	0.303
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	15.0545	−62.9604	−0.04871	−4.1822	<0.0005
Construction	8.5451	−37.6404	−0.05644	−4.4049	<0.0005
Utilities	12.1235	−10.1939	−0.01000	−0.8408	0.405
Wholesale and retail trades	7.0465	−24.6592	−0.04746	−3.4995	0.001
Financial services	8.5109	−10.1062	−0.01536	−1.1874	0.233
Government	11.4774	−42.7975	−0.04574	−3.7289	<0.0005
Military and unknown	13.2154	9.5005	0.00860	0.7189	0.479
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	6.2189	−27.1031	−0.05133	−4.3582	<0.0005
101–150 miles	9.3352	−30.3192	−0.03740	−3.2478	0.001
Over 150 miles	10.8830	−38.6993	−0.04058	−3.5560	0.001
Omitted: Under 51 miles.					

TABLE 46.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the nation, 1959–60*—Continued

Multiple Correlation Coefficients				
R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4580	0.6768	0.4548	0.6744	167.98043234

Factor	Std. errors of coefficients	Regression coefficients	Beta weights	TB	Sig.
Farm employment status:					
Single-job farm wage worker	13.7945	−28.8678	−0.04644	−2.0927	0.034
Multiple-job farm wage worker	12.3955	−23.9480	−0.05110	−1.9320	0.050
Multiple-job farm operator-NFW	13.8667	−44.0238	−0.06195	−3.1748	0.002
Multiple-job farm operator-SEO	15.9533	90.7827	0.09141	5.6905	<0.0005
Omitted: Single-job farm operator					
Earnings in farming:					
$1,200 to $1,799	7.8618	53.0307	0.08472	6.7454	<0.0005
$1,800 to $2,399	8.8531	92.1189	0.12929	10.4052	<0.0005
$2,400 to $2,999	9.9847	135.5087	0.16677	13.5716	<0.0005
$3,000 and over	7.7362	300.4725	0.54770	38.8396	<0.0005
Omitted: Under $1,200.					
Experience: % of years of covered employment.	14.2056	342.4764	0.28031	24.1086	<0.0005

TABLE 47.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the Northeast, 1957–60*

Multiple Correlation Coefficients				
R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4905	0.7004	0.4835	0.6953	155.70309420

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	−37.4766	28.8902	......	−1.2972	0.191
Race:					
Negro	−74.8961	12.0472	−0.10681	−6.2169	<0.0005
Omitted: White.					
Age:					
25–34	5.1081	10.0222	0.00986	0.5097	0.617
35–44	−1.0833	11.3991	−0.00186	−0.0950	0.887
45 and over	−58.5794	10.6782	−0.11537	−5.4859	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	5.3946	13.7429	0.00658	0.3925	0.696
101–150 miles	−16.8757	18.9568	−0.01481	−0.8902	0.377
151 miles or more	7.4712	10.7012	0.01194	0.6982	0.492
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−38.0036	21.3548	−0.03029	−1.7796	0.072
Construction	−33.4357	12.1977	−0.04976	−2.7411	0.006
Utilities	12.8516	18.1894	0.01221	0.7065	0.487
Wholesale and retail trades	−29.2685	9.4915	−0.05928	−3.0836	0.002
Financial services	9.2481	11.6549	0.01468	0.7935	0.433
Government	−32.5655	16.7664	−0.03450	−1.9423	0.049
Military and unknown	−27.7859	26.8231	−0.01764	−1.0359	6.301
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−36.7477	10.0254	−0.06162	−3.6655	<0.0005
101–150 miles	−26.0948	21.5891	−0.02010	−1.2087	0.225
Over 150 miles	−51.8989	18.3812	−0.04702	−2.8235	0.005
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−68.9795	22.2254	−0.12679	−3.1036	0.002
Multiple-job farm wage worker	−61.9577	20.9050	−0.13709	−2.9638	0.003
Multiple-job farm operator-NFW	−86.8191	23.7608	−0.10922	−3.6539	<0.0005
Multiple-job farm operator-SEO	67.7132	26.0966	0.06539	2.5947	0.009
Omitted: Single-job farm operator					
Earnings in farming:					
$1,200 to $1,799	44.3007	11.1596	0.07199	3.9697	<0.0005
$1,800 to $2,399	97.2269	12.8847	0.13746	7.5459	<0.0005
$2,400 to $2,999	135.6988	13.6023	0.18083	9.9762	<0.0005
$3,000 and over	275.8253	10.7637	0.53144	25.6255	<0.0005
Omitted: Under $1,200.					
Experience: % of years of covered employment.	342.7341	19.4944	0.30445	17.5811	<0.0005

TABLE 48.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the North Central, 1957–60*

Multiple Correlation Coefficients				
R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4218	0.6495	0.4167	0.6455	177.77806663

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	−101.3692	20.8717	......	−4.8568	<0.0005
Race:					
Negro	−59.2458	23.2107	−0.03638	−2.5525	0.010
Omitted: White.					
Age:					
25–34	16.4031	9.9799	0.02829	1.6436	0.096
35–44	8.3486	10.2395	0.01430	0.8153	0.420
45 and over	−43.4000	9.8552	−0.08613	−4.4037	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	11.8260	13.4523	0.01255	0.8791	0.383
101–150 miles	9.9975	16.3344	0.00872	0.6121	0.548
151 miles or more	−14.4976	9.9343	−0.02163	−1.4594	0.140
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−4.3477	23.3180	−0.00269	−0.1865	0.831
Construction	−33.1976	11.0817	−0.04704	−2.9957	0.003
Utilities	−24.0576	14.9059	−0.02420	−1.6140	0.102
Wholesale and retail trades	−27.6659	8.9231	−0.05159	−3.1005	0.002
Financial services	−27.6907	11.1417	−0.03978	−2.4853	0.013
Government	−71.8270	14.4838	−0.07696	−4.9591	<0.0005
Military and unknown	−10.4251	18.1639	−0.00846	−0.5739	0.573
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−30.4275	7.7925	−0.05738	−3.9047	<0.0005
101–150 miles	−55.7625	11.0149	−0.07386	−5.0625	<0.0005
Over 150 miles	−14.8036	35.3761	−0.00592	−0.4185	0.678
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−20.3820	15.4858	−0.02989	−1.3162	0.185
Multiple-job farm wage worker	−6.6570	13.0214	−0.01428	−0.5112	0.616
Multiple-job farm operator-NFW	−58.7739	13.7595	−0.10273	−4.2715	<0.0005
Multiple-job farm operator-SEO	58.6806	15.7067	0.07470	3.7360	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	46.6497	10.1917	0.07382	4.5772	<0.0005
$1,800 to $2,399	79.3278	11.4722	0.11014	6.9148	<0.0005
$2,400 to $2,999	102.4394	13.2384	0.12217	7.7381	<0.0005
$3,000 and over	255.6319	9.5510	0.49277	26.7650	<0.0005
Omitted: Under $1,200.					
Experience: % of years of covered employment	383.3053	16.0299	0.35230	23.9118	<0.0005

TABLE 49.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the South, 1957–60*

Multiple Correlation Coefficients				
R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4036	0.6353	0.3979	0.6308	178.70869334

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	−64.4297	22.9373	......	−2.8090	0.005
Race:					
Negro	−38.0827	8.3309	−0.07451	−4.5440	<0.0005
Omitted: White.					
Age:					
25–34	22.2138	10.4711	0.03837	2.1214	0.032
35–44	−0.2963	10.6573	−0.00052	−0.0278	0.927
45 and over	−37.1857	10.1194	−0.07645	−3.6747	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	18.1404	13.3989	0.02088	1.3539	0.172
101–150 miles	−3.6382	17.5524	−0.00314	−0.2073	0.818
151 miles or more	22.6585	9.4627	0.03835	2.3945	0.016
Omitted: Under 51 miles.					

TABLE 49.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the South, 1957–60*—Continued

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4036	0.6353	0.3979	0.6308	178.70869334

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Industry of nonfarm employment:					
Mining	9.0674	21.2695	0.00659	0.4263	0.673
Construction	−23.8818	11.1748	−0.03764	−2.1371	0.031
Utilities	−21.5640	17.7306	−0.01917	−1.2162	0.222
Wholesale and retail trades	−11.1019	9.5673	−0.02130	−1.1604	0.244
Financial services	4.8385	11.6252	0.00723	0.4162	0.680
Government	−51.6963	14.6627	−0.05897	−3.5257	0.001
Military and unknown	92.4968	19.2754	0.07573	4.7987	<0.0005
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−29.2342	7.5691	−0.06178	−3.8623	<0.0005
101–150 miles	−25.2016	14.7103	−0.02627	−1.7132	0.083
Over 150 miles	5.3380	179.3447	0.00044	0.0298	0.926
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−46.5377	16.3846	−0.07654	−2.8403	0.005
Multiple-job farm wage worker	−39.9989	14.9602	−0.08684	−2.6737	0.007
Multiple-job farm operator-NFW	−35.7990	16.0365	−0.05888	−2.2324	0.024
Multiple-job farm operator-SEO	74.6229	17.8920	0.09519	4.1707	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	37.9058	9.9566	0.06265	3.8071	<0.0005
$1,800 to $2,399	61.4320	11.6173	0.08665	5.2880	<0.0005
$2,400 to $2,999	102.2787	14.2216	0.11534	7.1918	<0.0005
$3,000 and over	288.5775	11.6903	0.44226	24.6852	<0.0005
Omitted: Under $1,200.					
Experience: % of years of covered employment	313.6101	16.2867	0.29880	19.2556	<0.0005

TABLE 50.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the Plains, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4289	0.6549	0.4235	0.6508	158.57759486

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	−21.9751	20.8828	....	−5.8409	<0.0005
Race:					
Negro	37.4323	14.1490	−0.03935	−2.6456	0.008
Omitted: White.					
Age:					
24–34	1.9622	8.8670	0.00381	0.2213	0.809
35–44	−23.1490	9.3058	−0.04305	−2.4876	0.012
45 and over	−42.8360	8.6181	−0.09197	−4.9705	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	8.2353	11.6285	0.01056	0.7082	0.486
101–150 miles	12.1473	12.8693	0.01410	0.9439	0.348
151 miles or more	1.3667	7.4375	0.00295	0.1838	0.833
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	30.3454	20.3830	0.02293	1.4888	0.132
Construction	−22.9359	10.3400	−0.04197	−2.2182	0.025
Utilities	−25.5715	14.7077	−0.02819	−1.7387	0.078
Wholesale and retail trades	−22.4067	9.3718	−0.04850	−2.3909	0.016
Financial services	−9.6204	10.8049	−0.01649	−0.8904	0.377
Government	−35.2172	13.1032	−0.04648	−2.6877	0.007
Military and unknown	3.3074	15.3409	0.00348	0.2156	0.813
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−19.2605	7.9558	−0.03886	−2.4209	0.015
101–150 miles	6.1697	9.7121	0.00998	0.6353	0.533
Over 150 miles	−5.8522	8.6504	−0.01088	−0.6765	0.506
Omitted: Under 51 miles.					

TABLE 50.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the Plains, 1957–60*—Continued

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4289	0.6549	0.4235	0.6508	158.57759486

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Farm employment status:					
Single-job farm wage worker	−19.1548	15.9386	−0.03410	−1.2018	0.227
Multiple-job farm wage worker	−4.5184	14.1738	−0.01056	−0.3188	0.745
Multiple-job farm operator-NFW	−28.2514	16.2410	−0.04230	−1.7395	0.078
Multiple-job farm operator-SEO	113.2252	17.9654	0.13068	6.3024	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	46.6276	9.1681	0.08307	5.0859	<0.0005
$1,800 to $2,399	75.0516	10.7764	0.11106	6.9645	<0.0005
$2,400 to $2,999	121.9860	11.2739	0.17276	10.8202	<0.0005
$3,000 and over	257.2356	9.4838	0.48157	27.1238	<0.0005
Omitted: Under $1,200.					
Experience: % of years of covered employment	362.3155	14.6440	0.38708	24.7416	<0.0005

TABLE 51.—*Results of regression equation of factors associated with long-run earnings of mobile persons, the West, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.4695	0.6852	0.4635	0.6808	172.87210305

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	−103.3297	31.2194	......	−3.3098	0.001
Race:					
Negro	−63.6659	23.1532	−0.04218	−2.7498	0.006
Omitted: White.					
Age:					
25–34	−8.8134	9.9870	−0.01603	−0.8825	0.382
35–44	−15.3159	10.7197	−0.02533	−1.4288	0.149
45 and over	−49.9764	10.1467	−0.09100	−4.9254	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	−3.8786	13.3635	−0.00454	−0.2902	0.764
101–150 miles	−15.1444	15.4225	−0.01528	−0.9820	0.328
151 miles or more	−9.0616	8.3968	−0.01765	−1.0792	0.280
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−56.7876	19.7453	−0.04565	−2.8760	0.004
Construction	−11.2041	12.2255	−0.01583	−0.9165	0.363
Utilities	5.8046	15.7599	0.00599	0.3683	0.712
Wholesale and retail trades	−31.6037	9.4959	−0.06086	−3.3281	0.001
Financial services	−6.8953	11.7300	−0.01025	−0.5878	0.564
Government	3.9526	20.8746	0.00298	0.1894	0.829
Military and unknown	47.4092	24.5464	0.03035	1.9314	0.051
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	−22.9472	10.1239	−0.03524	−2.2666	0.022
101–150 miles	−33.8257	11.9683	−0.04385	−2.8263	0.005
Over 150 miles	28.6813	13.9318	−0.03180	−2.0587	0.037
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−21.7183	28.0852	−0.03717	−0.7733	0.445
Multiple-job farm wage worker	−16.7711	27.0725	−0.03165	−0.6195	0.543
Multiple-job farm operator-NFW	−81.3316	35.0790	−0.05343	−2.3185	0.019
Multiple-job farm operator-SEO	161.2841	35.0210	0.10506	4.6053	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	54.5351	11.4349	0.07941	4.7692	<0.0005
$1,800 to $2,399	88.1227	12.6198	0.11646	6.9829	<0.0005
$2,400 to $2,999	140.6974	14.7493	0.15600	9.5392	<0.0005
$3,000 and over	291.3586	10.5684	0.51981	27.5688	<0.0005
Omitted: Under $1,200.					
Experience: % of years of covered employment	379.2529	17.3852	0.34644	21.8147	<0.0005

Table 52.—*Results of regression equation of factors associated with occupational instability after mobility, the nation, 1957*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimates
0.1624	0.4030	0.1572	0.3965	3.07121638

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	5.4749	0.2660	......	20.5840	<0.0005
Income change	−0.0029	0.0003	−0.15219	−10.3461	<0.0005
Race:					
Negro	0.0964	0.1633	0.00859	0.5900	0.563
Omitted: White.					
Age:					
25-34	0.5545	0.1392	0.06836	3.9846	<0.0005
35-44	0.9689	0.1456	0.11501	6.6530	<0.0005
45 and over	1.4943	0.1353	0.20459	11.0451	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.4904	0.1940	0.03638	2.5277	0.011
101–150 miles	0.2425	0.2421	0.01441	1.0018	0.318
150 miles or more	0.0750	0.1234	0.00912	0.6675	0.551
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	0.9686	0.3082	0.04619	3.1425	0.002
Construction	0.3814	0.1572	0.04050	2.4267	0.015
Utilities	0.3702	0.2202	0.02570	1.6814	0.089
Wholesale and retail trades	0.4531	0.1302	0.06200	3.4800	0.001
Financial services	0.3353	0.1599	0.03484	2.0971	0.034
Government	0.2523	0.2269	0.01724	1.1122	0.265
Military and unknown	0.1685	0.2984	0.00838	0.5648	0.579
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	0.0167	0.1161	0.00214	0.1436	0.857
101–150 miles	0.3255	0.1665	0.02842	1.9550	0.048
Over 150 miles	0.1706	0.2000	0.01233	0.8529	0.398
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−1.0677	0.2513	−0.12215	−4.2481	<0.0005
Multiple-job farm wage worker	−2.4076	0.2301	−0.35592	−10.4633	<0.0005
Multiple-job farm operator-NFW	−1.9770	0.2565	−0.19339	−7.7070	<0.0005
Multiple-job farm operator-SEO	−0.9418	0.2768	−0.07515	−3.4020	0.001
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−2.0141	0.1437	−0.11083	−7.0557	<0.0005
$1,800 to $2,399	−3.1127	0.1633	−0.10616	−6.8131	<0.0005
$2,400 to $2,999	−3.6900	0.1824	−0.14299	−9.2671	<0.0005
$3,000 and over	−1.9733	0.1432	−0.24155	−13.7766	<0.0005
Omitted: Under $1,200.					

Table 53.—*Results of regression equation of factors associated with occupational instability after mobility, the nation, 1958*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimates
0.1638	0.4047	0.1585	0.3981	2.60539273

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	0.5436	0.2101	......	21.6221	<0.0005
Income change	−0.0036	0.0002	−0.19312	−12.5721	<0.0005
Race:					
Negro	0.0897	0.1498	0.00881	0.5987	0.557
Omitted: White.					
Age:					
25-34	0.5749	0.1181	0.08328	4.8686	<0.0005
35-44	0.7763	0.1254	0.10618	6.1898	<0.0005
45 and over	1.0382	0.1168	0.16593	8.8901	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.0828	0.1544	0.00786	0.5361	0.599
101–150 miles	0.1998	0.1899	0.01534	1.0523	0.293
150 miles or more	0.3426	0.1067	0.04874	3.2097	0.002
Omitted: Under 51 miles.					

TABLE 53.—*Results of regression equation of factors associated with occupational instability after mobility, the nation, 1958*—Continued

R_2	Multiple Correlation Coefficients R	R Bar 2	R Bar	Standard Error of Estimate
0.1638	0.4047	0.1585	0.3981	2.60539273

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Industry of nonfarm employment:					
Mining	0.4093	0.2626	0.02308	1.5584	0.115
Construction	0.2437	0.1326	0.03017	1.8375	0.063
Utilities	0.4276	0.1967	0.03305	2.1739	0.028
Wholesale and retail trades	0.3746	0.1128	0.05751	3.3201	0.001
Financial services	0.3028	0.1354	0.03681	2.2372	0.024
Government	0.2428	0.1748	0.02234	1.3890	0.161
Military and unknown	0.1694	0.2441	0.01037	0.6939	0.495
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	0.1493	0.0999	0.02263	1.4954	0.131
101–150 miles	0.1176	0.1470	0.01187	0.8003	0.429
Over 150 miles	0.2939	0.1708	0.02520	1.7202	0.082
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−0.6856	0.1985	−0.09268	−3.4549	0.001
Multiple-job farm wage worker	−1.9758	0.1770	−0.34662	−11.1623	<0.0005
Multiple-job farm operator-NFW	−1.8089	0.1958	−0.22273	−9.2393	<0.0005
Multiple-job farm operator-SEO	−0.8352	0.2253	−0.07580	−3.7076	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−0.6352	0.1221	−0.08206	−5.2015	<0.0005
$1,800 to $2,399	−0.7884	0.1448	−0.08576	−5.4461	<0.0005
$2,400 to $2,999	−1.0143	0.1658	−0.09542	−6.1169	<0.0005
$3,000 and over	−1.4088	0.1249	−0.20087	−11.2745	<0.0005
Omitted: Under $1,200.					

TABLE 54.—*Results of regression equation of factors associated with occupational instability after mobility, the nation, 1959*

R_2	Multiple Correlation Coefficients R	R Bar 2	R Bar	Standard Error of Estimates
0.1795	0.4237	0.1746	0.4178	2.15080922

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	3.9822	0.1820	......	21.8788	<0.0005
Income change	−0.0032	0.0002	−0.20685	−14.2778	<0.0005
Race:					
Negro	0.1096	−0.0361	−0.00473	−0.3299	0.738
Omitted: White.					
Age:					
25-34	0.4089	0.0945	0.06994	4.3293	<0.0005
35-44	0.5475	0.0990	0.09102	5.5276	<0.0005
45 and over	0.8057	0.0926	0.15107	8.7055	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.3061	0.1227	0.03517	2.4952	0.012
101–150 miles	0.0457	0.1441	0.00445	0.3169	0.747
150 miles or more	0.2300	0.0834	0.04022	2.7584	0.006
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	0.0779	0.1930	0.00579	0.4036	0.688
Construction	0.1009	0.1096	0.01454	0.9204	0.360
Utilities	0.1991	0.1552	0.01877	1.2828	0.196
Wholesale and retail trades	0.0673	0.0905	0.01245	0.7436	0.464
Financial services	0.2361	0.1090	0.01988	1.2487	0.209
Government	0.0363	0.1478	0.00372	0.2454	0.793
Military and unknown	0.2115	0.1692	0.01840	1.2500	0.209
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	0.0321	0.0798	0.00584	0.4020	0.689
101–150 miles	−0.0840	0.1198	−0.00996	−0.7012	0.490
Over 150 miles	0.0464	0.1394	0.00467	0.3329	0.736
Omitted: Under 51 miles.					

TABLE 54.—*Results of regression equation of factors associated with occupational instability after mobility, the nation, 1959*—Continued

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1795	0.4237	0.1746	0.4178	2.15080922

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Farm employment status:					
Single-job farm wage worker	−0.1931	0.1767	−0.02985	−1.0926	0.274
Multiple-job farm wage worker	−0.4356	0.1590	−0.29440	−9.0278	<0.0005
Multiple-job farm operator-NFW	−0.2183	0.1775	−0.16474	−6.8628	<0.0005
Multiple-job farm operator-SEO	−0.1555	0.2043	−0.11181	−5.6568	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−1.5896	0.1003	−0.09052	−5.8768	<0.0005
$1,800 to $2,399	−1.0914	0.1128	−0.14720	−9.6751	<0.0005
$2,400 to $2,999	−1.1289	0.1276	−0.13351	−8.8501	<0.0005
$3,000 and over	−1.3912	0.0993	−0.24370	−14.0094	<0.0005
Omitted: Under $1,200.					

TABLE 55.—*Results of regression equation of factors associated with occupational instability after mobility, the Northeast, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimates
0.1631	0.4038	0.1516	0.3893	2.63947832

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	3.9810	0.3898	......	10.2117	<0.0005
Income change	−0.0039	0.0005	−0.19243	−8.5645	<0.0005
Race:					
Negro	0.2132	0.2053	0.02299	1.0388	0.300
Omitted: White.					
Age:					
25-34	0.4668	0.1698	0.06811	2.7490	0.006
35-44	0.5689	0.1927	0.07374	2.9516	0.003
45 and over	1.1386	0.1779	0.16954	6.4016	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.1167	0.2330	0.01076	0.5008	0.623
101–150 miles	0.0392	0.3214	0.00260	0.1220	0.870
150 miles or more	0.0340	0.1814	0.00410	0.1872	0.830
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	0.2623	0.3621	0.01581	0.7245	0.476
Construction	0.1442	0.2070	0.01623	0.6969	0.493
Utilities	0.3517	0.3087	0.02525	1.1393	0.253
Wholesale and retail trades	0.5410	0.1608	0.08284	3.3637	0.001
Financial services	0.2027	0.1975	0.02433	1.0265	0.306
Government	0.1651	0.2847	0.01322	0.5799	0.569
Military and unknown	0.4984	0.4543	0.02392	1.0971	0.272
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	0.1208	0.1703	0.01532	0.7097	0.485
101–150 miles	0.0152	0.3660	0.00088	0.0414	0.919
Over 150 miles	0.3541	0.3121	0.02426	1.1344	0.256
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−0.1211	0.3768	−0.01683	−0.3215	0.744
Multiple-job farm wage worker	−1.3757	0.3542	−0.23015	−3.8839	<0.0005
Multiple-job farm operator-NFW	−1.4800	0.4029	−0.14077	−3.6735	<0.0005
Multiple-job farm operator-SEO	−1.0312	0.4421	−0.07529	−2.3327	0.019
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−0.5921	0.1890	−0.07275	−3.1323	0.002
$1,800 to $2,399	−1.0250	0.2186	−0.10957	−4.6895	<0.0005
$2,400 to $2,999	−1.3490	0.2298	−0.25350	−5.8706	<0.0005
$3,000 and over	−1.7403	0.1842	−0.13591	−9.4478	<0.0005
Omitted: Under $1,200.					

TABLE 56.—*Results of regression equation of factors associated with occupational instability after mobility, the North Central, 1957–60*

Multiple Correlation Coefficients				
R_2	R	R Bar 2	R Bar	Standard Error of Estimates
0.1630	0.4038	0.1557	0.3945	2.58640267

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	4.5744	0.2306	......	19.8407	<0.0005
Income change	−0.0026	0.0003	−0.17725	−9.8148	<0.0005
Race:					
Negro	0.5961	0.3377	0.03027	1.7652	0.074
Omitted: White.					
Age:					
25-34	0.3765	0.1452	0.05370	2.5936	0.009
35-44	0.5714	0.1487	0.08094	3.8425	<0.0005
45 and over	0.9570	0.1415	0.15706	6.7647	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.1036	0.1960	0.00909	0.5286	0.604
101–150 miles	−0.0526	0.2378	−0.00379	−0.2211	0.809
150 miles or more	0.3318	0.1446	0.04094	2.2950	0.021
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	0.3798	0.3395	0.01944	1.1187	0.262
Construction	0.3116	0.1613	0.03651	1.9317	0.051
Utilities	0.6190	0.2170	0.05150	2.8529	0.004
Wholesale and retail trades	0.3158	0.1303	0.04869	2.4236	0.015
Financial services	0.2947	0.1621	0.03500	1.8173	0.066
Government	0.3759	0.2125	0.03331	1.7689	0.073
Military and unknown	0.3731	0.2644	0.02503	1.4108	0.154
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	0.0561	0.1135	0.00874	0.4941	0.627
101–150 miles	0.0479	0.1605	0.00525	0.2984	0.759
Over 150 miles	−0.5948	0.5145	−0.01968	−1.1560	0.246
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−0.6998	0.2249	−0.08486	−3.1110	0.002
Multiple-job farm wage worker	−2.0512	0.1891	−0.36397	−10.8472	<0.0005
Multiple-job farm operator-NFW	−1.6969	0.1988	−0.24528	−8.5361	<0.0005
Multiple-job farm operator-SEO	−1.1881	0.2290	−0.12508	−5.1887	<0.0005
Omitted: Single-job farm operator.					
Earnings in farming:					
\$1,200 to \$1,799	−0.4919	0.1481	−0.06438	−3.3214	0.001
\$1,800 to \$2,399	−0.7898	0.1669	−0.09069	−4.7325	<0.0005
\$2,400 to \$2,999	−0.7936	0.1930	−0.07827	−4.1130	<0.0005
\$3,000 and over	−1.2607	0.1404	−0.20098	−8.9803	<0.0005
Omitted: Under \$1,200.					

TABLE 57.—*Results of regression equation of factors associated with occupational instability after mobility, the South, 1957–60*

Multiple Correlation Coefficients				
R_2	R	R Bar 2	R Bar	Standard Error of Estimates
0.1308	0.3617	0.1225	0.3499	2.77370731

Factor	Std. errors of coefficients	Regression coefficients	Beta weights	TB	Sig.
Constant	0.2725	4.0141	......	14.7332	<0.0005
Income change	0.0003	−0.0026	−0.15756	−8.3655	<0.0005
Race:					
Negro	0.1304	−0.0344	−0.00523	−0.2635	0.782
Omitted: White.					
Age:					
25-34	0.1624	0.2766	0.03715	1.7025	0.085
35-44	0.1650	0.6710	0.09239	4.0667	<0.0005
45 and over	0.1547	1.1236	0.17968	7.2609	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.2080	0.2946	0.02637	1.4165	0.153
101–150 miles	0.2724	0.4527	0.03043	1.6619	0.092
150 miles or more	0.1470	0.2280	0.03002	1.5516	0.117
Omitted: Under 51 miles.					

TABLE 57.—*Results of regression equation of factors associated with occupational instability after mobility, the South, 1957–60*—Continued

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.1308	0.3617	0.1225	0.3499	2.77370731

Factor	Std. errors of coefficients	Regression coefficients	Beta weights	TB	Sig.
Industry of nonfarm employment:					
Mining	0.3300	0.5248	0.02968	1.5902	0.108
Construction	0.1734	0.1854	0.02272	1.0689	0.285
Utilities	0.2752	0.2569	0.01777	0.9336	0.353
Wholesale and retail trades	0.1486	0.2848	0.04251	1.9168	0.052
Financial services	0.1802	0.2941	0.03416	1.6324	0.098
Government	0.2285	0.2247	0.01994	0.9832	0.327
Military and unknown	0.2992	−0.0462	−0.00294	−0.1545	0.851
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	0.1178	0.0137	0.00224	0.1160	0.874
101–150 miles	0.2292	−0.1010	−0.00819	−0.4405	0.663
Over 150 miles	2.7835	−3.0339	−0.01959	−1.0900	0.275
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	0.2543	−0.0036	−0.00046	−0.0141	0.986
Multiple-job farm wage worker	0.2322	−1.0117	−0.17085	−4.3573	<0.0005
Multiple-job farm operator-NFW	0.2489	−0.9658	−0.12356	−3.8805	<0.0005
Multiple-job farm operator-SEO	0.2777	−0.0805	−0.00799	−0.2900	0.764
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	0.1533	−1.0132	−0.13026	−6.6095	<0.0005
$1,800 to $2,399	0.1793	−1.4870	−0.16313	−8.2955	<0.0005
$2,400 to $2,999	0.2204	−1.4429	−0.12656	−6.5477	<0.0005
$3,000 and over	0.1828	−1.6538	−0.19713	−9.0455	<0.0005
Omitted: Under $1,200.					

TABLE 58.—*Results of regression equation of factors associated with occupational instability after mobility, the Plains, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimates
0.2227	0.4719	0.2154	0.4641	2.58859728

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	5.7127	0.2858		19.9861	<0.0005
Income change	−0.0031	0.0003	−0.17425	−9.7237	<0.0005
Race:					
Negro	0.1758	0.2312	0.01321	0.7603	0.453
Omitted: White.					
Age:					
25-34	0.7242	0.1444	0.10043	5.0156	<0.0005
35-44	1.1554	0.1508	0.15356	7.6604	<0.0005
45 and over	1.2844	0.1377	0.19708	9.3301	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.2953	0.1898	0.02706	1.5555	0.116
101–150 miles	−0.0324	0.2101	−0.00208	−0.1540	0.851
150 miles or more	0.1463	0.1214	0.02259	1.2053	0.226
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	−0.1347	0.3326	−0.00727	−0.4049	0.688
Construction	0.1711	0.1689	0.02238	1.0132	0.312
Utilities	0.3734	0.2401	0.02942	1.5549	0.116
Wholesale and retail trades	0.2187	0.1531	0.03384	1.4287	0.149
Financial services	0.1011	0.1762	0.01238	0.5735	0.574
Government	0.0047	0.2147	0.00044	0.0217	0.931
Military and unknown	−0.2844	0.2504	−0.02137	−1.1359	0.255
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	0.1053	0.1299	0.01518	0.8105	0.423
101–150 miles	0.0179	0.1586	0.00207	0.1131	0.876
Over 150 miles	0.0903	0.1411	0.01290	0.6396	0.530
Omitted: Under 51 miles.					

TABLE 58.—*Results of regression equation of factors associated with occupational instability after mobility, the Plains, 1957–60*—Continued

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimate
0.2227	0.4719	0.2154	0.4641	2.58859728

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Farm employment status:					
Single-job farm wage worker	−1.3760	0.2591	−0.17506	−5.3099	<0.0005
Multiple-job farm wage worker	−3.0232	0.2293	−0.50490	−13.1832	<0.0005
Multiple-job farm operator-NFW	−2.2393	0.2614	−0.23960	−8.5664	<0.0005
Multiple-job farm operator-SEO	−0.8999	0.2948	−0.07423	−3.0530	0.002
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−0.9057	0.1490	−0.11533	−6.0790	<0.0005
$1,800 to $2,399	−0.9412	0.1755	−0.09954	−5.3621	<0.0005
$2,400 to $2,999	−1.3440	0.1835	−0.13603	−7.3228	<0.0005
$3,000 and over	−1.6819	0.1567	−0.22503	−10.7306	<0.0005
Omitted: Under $1,200.					

TABLE 59.—*Results of regression equation of factors associated with occupational instability after mobility, the West, 1957–60*

Multiple Correlation Coefficients

R_2	R	R Bar 2	R Bar	Standard Error of Estimates
0.1790	0.4231	0.1698		2.7077699

Factor	Regression coefficients	Std. errors of coefficients	Beta weights	TB	Sig.
Constant	5.66728517	0.44869928		12.5859	<0.0005
Income change	−0.00360002	0.00037074	−0.19020	−9.7103	<0.0005
Race:					
Negro	−0.43406634	0.36278047	−0.02284	−1.1965	0.230
Omitted: White.					
Age:					
25-34	0.73223727	0.15620356	0.10576	4.6877	<0.0005
35-44	0.81581584	0.16758819	0.10713	4.8680	<0.0005
45 and over	1.23159670	0.15725222	0.17809	7.8320	<0.0005
Omitted: Under 25.					
Distance migrated:					
51–100 miles	0.17947076	0.20928014	0.01669	0.8576	0.396
101–150 miles	−0.09220326	0.24153386	−0.00739	−0.3817	0.703
150 miles or more	−0.02752479	0.13148429	−0.00426	−0.2093	0.816
Omitted: Under 51 miles.					
Industry of nonfarm employment:					
Mining	0.67607756	0.30962334	0.04316	2.1835	0.027
Construction	0.33845575	0.19148885	0.03799	1.7675	0.074
Utilities	−0.03081121	0.24691629	−0.00252	−0.1248	0.869
Wholesale and retail trades	0.10457497	0.14896428	0.01599	0.7020	0.490
Financial services	0.27776952	0.18363689	0.03278	1.5126	0.126
Government	−0.17046489	0.32738311	−0.01021	−0.5207	0.609
Military and unknown	−0.09554252	0.38448358	−0.00486	−0.2485	0.791
Omitted: Manufacturing.					
Location relative to SMSA:					
51–100 miles	0.05699107	0.15853774	0.00695	0.3595	0.718
101–150 miles	0.19634656	0.18755105	0.02022	1.0469	0.296
Over 150 miles	−0.24949709	0.21806659	−0.02197	−1.1441	0.251
Omitted: Under 51 miles.					
Farm employment status:					
Single-job farm wage worker	−1.32285546	0.44052321	−0.17979	−3.0029	0.003
Multiple-job farm wage worker	−2.51130464	0.42431701	−0.37642	−5.9185	<0.0005
Multiple-job farm operator-NFW	−1.70818064	0.54736346	−0.08912	−3.1207	0.002
Multiple-job farm operator-SEO	−1.01498538	0.55057326	−0.05251	−1.8435	0.062
Omitted: Single-job farm operator.					
Earnings in farming:					
$1,200 to $1,799	−0.70092105	0.17881563	−0.08130	−3.9315	<0.0005
$1,800 to $2,399	−0.75173601	0.19745128	−0.07890	−3.8072	<0.0005
$2,400 to $2,999	−1.59732225	0.23001250	−0.14065	−6.9445	<0.0005
$3,000 and over	−1.99590097	0.16480132	−0.28279	−12.1110	<0.0005
Omitted: Under $1,200.					

Chapter 14

Labor Mobility: Some Costs and Returns

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Of the many decisions that people make in their lifetimes, where to work and at what to work are among the most important. The explanation and predictions of these choices are, of course, partly economic problems. In a modern economy such as that of the United States, the results of the collective location and job decisions are evident on every highway and in every community. Some of these decisions are still part of a great historic movement of rural people to urban centers.

In some ways it is odd that two-thirds of the way through the 20th century we are still seeking facts and explanatory theories about a process that has been going on in the Western World since at least the 17th century. Even in 19th-century United States, as immigrants broke new land in the West, New England farm people were entering mills. The net inflow of rural people to urban places has continued to the present. The speed of the movement has not been constant, but with few exceptions the annual net movement has been positive. Why, then, if the process is continuously working are we still concerned with how it works? More specifically, why are people considering programs to pay part of the cost of moving from public monies?

The simple answer, of course, is that a growing modern economy requires a continual reallocation of resources, and the spatial movement of labor is part of this allocation. The present paper attempts to examine in part the payoff on both private and public account to mobility of labor.

The current mode of viewing the economics of migration is as an investment in the human agent. Sjaastad (*12*)[1] has laid out the theoretical foundations for such an accounting. Briefly and very simply the theory says that observed spatial differences in earnings for like work will lead people to invest in a move that will tend to equalize these differences. To the individual involved this is an investment of the same order or in additional training, or in health services, and thus has some present value which can be compared with its cost. Before proceeding with this framework it may be useful to point out a special problem of rural-urban mobility versus migration.

Many geographic moves by members of the labor force involve not only a spatial change but an occupational change. The extent of such combinations depends, of course, on how finely we define occupations. In moves from rural or urban areas the confounding of occupational change with geographic change is almost always present, however gross the definition of occupation. The move is not just from rural X county to Y city; it is also from farmer, farm manager, farm laborer, or sharecropper to some other occupation.

Thus, the term migration usually refers to the geographic move, but the term mobility can refer to both occupational and geographic move. As occupational change depends on a classification of jobs, one cannot restrict the term mobility to such changes. The term mobility will be used here to refer to spatial moves whatever their nature. It should be understood, however, that all forms of mobility come under the same investment rubric if they involve an expenditure that leads to future returns.

This definitional problem presents only empirical difficulties, not theoretical ones. As Stigler (*13*) points out, the investment in search for a better job is of the same order as investment in migration or in schooling or in training. For the rural poor it may be relatively easy to aggregate the two investments, but for a general empirical study the two present real problems.[2]

The current paper represents an attempt to bring some bits and pieces of empirical evidence to bear on the costs and returns to labor mobility with specific reference to the rural poor. The rural poor seem to fall in four categories: (1) sharecroppers (especially southern Negro sharecroppers); (2) hired farmworkers; (3) migratory workers, who can be distinguished as a group from (2); and (4) subsistence and other small-size owner operators. All of these have a nonfarm opportunity cost of employment in nonfarm jobs.

No attempt is made to relate directly these groups with any particular opportunity. They each have characteristics that should be taken into account in any specific policy proposal. Some of the evidence that comes from the North Carolina Fund Pilot Mobility Study discussed later is directly applicable to groups (1), (2), and perhaps (4).

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[1] Numbers in parentheses indicate references listed at end of this paper.

[2] See Osburn (*8*) and Johnson (*6*) for a further description of the problem.

The coupling of location and occupation choice in a farm to nonfarm move presents easily identifiable information on backflows, and this difference between gross and net movements is discussed first. After a discussion of costs, the valuation of incomes and other externalities are discussed. The remainder of the paper presents some evidence on the returns to moving, and analyzes some results that have specific application to the rural poor.

The empirical information comes mainly from two sources. In the summer of 1965 a sample of 250 migrants and 250 nonmigrants were interviewed in Greensboro and Winston-Salem, N.C., for a study done for the U.S. Department of Commerce. Data on costs of and returns to moving were collected from this sample, and are reported fully by Osburn (*8*). The second source of data is a study done under contract for the U.S. Department of Labor as an evaluation study of the pilot mobility project undertaken by the North Carolina Fund. In this project certain rural poor (those unemployed or earning less than $1,200 per year) have been moved from eastern North Carolina to piedmont North Carolina, where nonfarm employment has been found for them.

Gross Versus Net Movements

One of the most significant findings in recent years in the area of labor mobility has been the documentation of a large difference in the gross and net flows of labor between farm and nonfarm occupations. Perkins and Hathaway (*9*) have very carefully analyzed this problem. For instance, they show that in 1956–57 the change in the farm labor force from a social security sample was —4.9 percent, while the gross off-farm movement was 15.6 percent. The backflow was 10.7 percent. Although the annual rates vary somewhat, the order of magnitude of the difference between gross and net rates stays the same for the years 1955 to 1959. It should come as no surprise, then, that not everyone who moves from a rural poverty status to an urban environment will stay.

The study of the N. C. Fund Pilot Mobility Study presents us with some insights into this aspect of labor mobility for the rural poor. One cause for a return flow—improper valuation of income differentials—will be taken up separately. However, the mobility study identified those who stayed in urban areas and those who returned. From the sample, therefore, one can make some estimates as to reasons for staying or not staying. These estimates can be placed in a conditional probability framework and any costs and benefits calculated can be adjusted for these return probabilities.

Before going into the estimates, we should examine the general nature of the return problem. We have been treating the decision to move, in general, as an investment decision governed by the usual investment choice criterion. But if all moves are not permanent, the time horizon of the investment should be considered as determinants of mobility.

The ordinary considerations for an investment would indicate that costs, discount rates, and a capital constraint are the determinants of a particular investment. In our particular case these variables would be the cost of the move and the cost of search for a different job. The returns are the expected wage differences, and the discount rates are those expected as an internal rate for the investment and that of the market. All of this is straightforward and is discussed in the sections on costs and benefits. As Stigler points out (*13*) the average length of a particular job may be as short as 3 years. Therefore one cannot calculate internal rates that extend over a working lifetime from an investment in search. The same would probably hold true for an investment in spatial mobility. As shown below, the real differences in income may be quite small for low income agricultural and nonagricultural workers, and the backflows may be explained by the same choice principles as the initial moves.

One external variable that affects these movements is not part of the investment calculus of individuals. That variable is the state of aggregate demand and unemployment in the economy. The effect of unemployment on the rate of net outmigration has been demonstrated by Bishop (*1*) and more recently by Perkins and Hathaway (*9*). It is well known that the incidence of unemployment falls most heavily on the unskilled, the noneducated, and minority groups. Some low income agricultural workers possess all of these attributes in addition to their occupational characteristics. Any change in overall economic activity that slows the migration process will in all probability affect this group even more. As the rationing of nonfarm jobs becomes tighter one would expect the proportion of low income, low skilled workers in the gross outflow from agriculture to decrease.

No data are presented in this paper on this external effect. However, as Schultz (most recently in (*11*) and many other places) and others have often pointed out, the single most effective weapon for a manpower policy in agriculture is probably one of full employment in nonagriculture.

The study of the N. C. Fund mobility program covered only a period in which unemployment had fallen to quite low levels in relation to the average of the preceding 5 or 6 years. The effect of low unemployment was to ease job rationing and make jobs easier to find, and the effect persisted over the period. In looking at the determinants of the backflow then, one can ignore changes in the state of the economy.

Two separate samples of persons relocated to nonfarm jobs have been examined. Each sample came from a separate contract, and they can be called Phase I and Phase II of the mobility program. In Phase II many more resources were allocated to premove and postmove counseling, finding and securing housing, etc. This expenditure is reflected in the difference in backflow—more than half returned in Phase I whereas less than half returned in Phase II.[3]

In order to assess the significance of certain variables on the decision to stay or not to stay, regressions were run where the dependent variable was a dichotomous variable—stay or not stay.[4]

The following variables were regressed on the stay or not stay variable: age, sex, education, marital status, size of family, number of family members working, number of family members moved, income, number of jobs previously held, length of residence, and race. Age, education, size of family, both variables for number of members working and moved, income, number of jobs, and length of residence are continuous variables, the others are dummy variables taking the values zero or one. The observation was one if male, single, Negro; zero if female, married, and Indian.

The regression results are shown in tables 1 and 2. The two phases are analyzed separately. An F test indicates rejection of the hypothesis that the two samples are the same at the 1-percent level. The results of these regressions are discussed briefly.[5]

For Phase I the only variable that is really significant is length of residence despite the fact that the overall regression explains 82 percent of the variation in the decision to stay. Three variables alone explain 80 percent—these are sex, income, and length of residence. When these are regressed alone we get the coefficients shown in the righthand column of table 1.

These coefficients (subject to the discussion in footnote 4) can be interpreted as conditional probabilities. Thus, one can say that the conditional probability of a person staying after a move is lowered by .21 if the person is a male; the probability is increased by .09 for an additional month of residence. In other words, the longer a person resides in the area the less likely he becomes to return home.

More of the coefficients were significant for Phase II. If we look just at the most significant coefficients in column 3 of table 2, we see that most of the signs go in the "right" direction. The exceptions are number of family and marital status, where the estimated coefficients indicate a person is less likely to stay if he (or she) is married, and

TABLE 1.—PHASE I: *Regression results of selected variables on the decision to stay or not to stay in area to which relocated* [1]

Variable	Coefficient	Coefficient
Age	−.00009	
	(.0074)	
Sex	−.2412	−.2082
	(.1933)	(.0979)
Education	−.0175	
	(.0271)	
Marital status	.0687	
	(.3056)	
Size of family	.0178	
	(.0464)	
Number of family working	.2415	
	(1.4565)	
Number of family moved	−.0367	
	(.4027)	
Monthly income	.0025	.0018
	(.0024)	(.0015)
Number of previous jobs held	−.0143	
	(.0700)	
Length of residence	.0872	.0910
	(.0113)	(.0088)
Race	.0658	
	(.1201)	
Constant term	−.3418	−.2434
R^2	.8188	.8045

[1] From N.C. Fund Mobility Project (34 observations).

TABLE 2.—PHASE II: *Regression results of selected variables on the decision to stay or not to stay in area to which relocated* [1]

Variable	Coefficient	Coefficient
Age	.0120	.0158
	(.0113)	(.0092)
Sex	−.2627	−.2292
	(.1201)	(.1091)
Education	−.0185	
	(.0279)	
Marital status	−.3956	−.3405
	(.2305)	(.1645)
Size of family	−.1549	−.1429
	(.0670)	(.0568)
Number of family working	−.0604	
	(.2709)	
Number of family moved	.1287	.1103
	(.0668)	(.0478)
Monthly income	.0016	
	(.0020)	
Number of previous jobs held	−.0979	−.1183
	(.0598)	(.0479)
Length of residence	.1420	.1513
	(.0236)	(.0196)
Race	.2804	.2909
	(.1105)	(.1028)
Constant term	.4870	.1394
R^2	.8328	.8264

[1] From N.C. Fund Mobility Project (34 observations).

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[3] The percentages are 62 and 32 for returns. It must be remembered that the length of time for observations is less for Phase II.

[4] As discussed in Goldberger (*4*) and elsewhere there are at least two statistical problems in running such a regression. Heteroscedasticity of the errors is built into the regression. Secondly, the fitted equation can result in predicted values outside the 0–1 range of the observed dependent variables. These problems are not pursued here. The second problem was found not to be of concern. The reader is simply warned that not all of the assumptions necessary for performing tests on the coefficients are met.

[5] A more complete discussion of this evaluation will be found in a forthcoming M.S. thesis by Richard Robbins at N.C. State University, Raleigh, and in a forthcoming report to the U.S. Department of Labor.

the larger the family. The result can be rationalized in part by the fact that some married persons did not take their spouse, and thus their marital status was conductive to residence instability.

There were no particular a priori reasons for specifying greater desire to stay with regard to sex or race. As in Phase I females appear more likely to stay, and Negroes appear more likely to stay than Indians.

The number of jobs previously held is apparently of some significance. Holding the other variables constant, more jobs held indicates a history of job change that makes one less likely to remain in a new job.

Again, as in Phase I, the longer one stays the greater the likelihood to keep staying. It should be noted that in Phase II the time for the observations is shorter, and probably explains the greater absolute magnitude of the coefficients.

It is interesting that income as a variable does not enter either regression. Given the low skill levels and low pay it might be expected that the pay would be uniformly low and hence there would not be enough variability to lend to any explanatory power. Actually for group I the average weekly earnings were $55.53 with a standard deviation of $28.27. For group II the average weekly earnings were $44.32 with a standard deviation of $31.15. Apparently lack of variation in the observed incomes does not account for the failure of these variables to explain a larger net proportion of the return decision.

The implications of the regressions would seem to be that in an area and at a time where the demand for labor was relatively large, factors other than simple money income differences affected job location decisions for the rural poor. Some persons will pay to return to their home area though the expectation is not certain that all will get jobs there. Males, Indians, and younger people appear more likely to pay for this choice, other things being equal.

The Costs of Moving

While Sjaastad has laid out the theoretical framework for viewing migration as an investment activity, relatively little work on the empirical side has come within that framework. Some recent work by Osburn (*8*) presents the most complete accounting of costs and returns for a sample of migrants with which I am familiar. There have been earlier estimates of the costs involved in moving, notably an Area Redevelopment Administration study of a national sample (*7*). However, the Osburn study has collected not only the direct costs of moving but the opportunity costs involved also.

Osburn's data came from a sample of inmigrants to Greensboro and Winston-Salem, N.C. These family heads were interviewed in the summer of 1965, and employment and income data were collected for jobs going back to 1955. The data on direct costs confirm the view that on the average it does not cost very much to move around. The average direct cost of move for 127 white families was $117.50 and for 127 nonwhite families it was $43.86.

These numbers obscure some important variables, however. Seven percent of the white moves cost over $500; 25 percent of the white moves cost between $50 and $200. Also, 38 percent of the white moves and 33 percent of the nonwhite moves were less than 100 miles in distance. What we see is that it does not cost too much if we do not move too far.

The unique part of Osburn's sample is that it includes information on foregone earnings. Thirty-two percent of the white and fifty-three percent of the nonwhites had foregone earnings. For the group that had foregone earnings, the average for both white and nonwhite was approximately $450. One of the interesting facets of the foregone earnings data is that a large proportion of those with lower incomes had foregone earnings. Forty-two percent of the whites and eighty-five percent of the nonwhites who experienced foregone earnings had incomes of less than $4,000 per year. The inference is that some time was spent without pay either in moving or in job search. The average cost of this time for those with incomes under $4,000 was $161 for whites and $415 for nonwhites.[6]

Adding the foregone earnings to the direct costs makes the average costs borne by the individuals $266 for whites and $283 for nonwhites. These averages are not startling in their magnitude, but they may easily exceed either the savings or the borrowing capacity of the rural poor, or both.

The costs on private account actually exceed the averages listed. Some people received less in the new location than they did in the old. On the average, of course, all moves yielded a positive return. Some of those whose income differential was intially negative received a positive differential in subsequent years, and some respondents indicated they knowingly accepted a negative return for a short period. These negative income differentials must be added to the cost side.

Another set of costs that does not appear in the personal budgets of the movers is the cost of moving borne by employers. In any estimate of the total resource cost involved in moving these costs must be included.[7]

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[6] While not a direct test, this difference would indicate a more informal labor market for nonwhites. Since distances are not too different, more time must have been spent looking for work.

[7] A social accounting problem may still be present on the returns side. We only have information on earnings of the one moved. Presumably the employer expects some returns for moving his employee, and it is possible that the returns are understood.

When these last two items of cost are added in, the average costs for the Greensboro and Winston-Salem movers was **$492** for the whites and **$478** for the nonwhites.

The returns side of these data will not be gone into at this point, but on the average the returns, measured in income differentials, were **$523** per year for whites and **$635** per year for nonwhites. Compared with the cost figures, both of these imply rates of return greater than **100** percent, or the movers could recoup the costs in the first year. These returns are subject to the following qualifications:

(1) We do not necessarily have the whole array of movers. Some with negative or very low rates may have gone back or moved on.

(2) The returns are confounded with those of search for jobs and we have no direct costs of search.

(3) Psychic costs are not included. Indeed, what one may have is the measure of the nonmoney cost of a move.

(4) As noted later, certain income groups may have internal discount rates that approach **100** percent.

(5) It should also be noted that the farm-nonfarm differential discussed by Perkins and Hathaway (*9*) averages **$600**, which is close to the average here for what are mainly nonfarm to nonfarm moves.

We have some other evidence on costs from the N. C. Fund Pilot Mobility Project.*

The costs of the N. C. Fund mobility program can be broken down in several ways. The opportunity costs of the individuals moved might best be imputed from the cash allowances given them from the program. In Phase I this was a grant of **$51.50** plus a low interest loan of **$51.50**. In Phase II the grant was in the neighborhood of **$150**. These costs underestimate the actual cost of a move under the program.

We can look at two other costs of the program. We can divide the total costs of the program by the number of moves, or we can look at the direct costs per move. This latter figure can be gotten by subtracting administrative costs from a budget of the mobility program. If the program were other than a pilot program, the first estimate—total cost—would overstate the per move cost as some overhead type expenditures would represent investments of longer than a year.

The direct cost computation represents the opportunity cost of the Federal funds expended, but it also is an overestimate of the direct cost of moving a family. It includes expenditures for contacts made where no move took place.

The costs of the program are shown in table 3. As can be seen in the table, the average direct cost per move for **274** moves in Phase I was **$306.27**, and for **219** moves in Phase II was **$628.90**. Note carefully what these costs represent. In addition to the move and the contact expenditure mentioned, they also include expenditures on job search, housing search, and other ancillary services. The ancillary services budget in Phase II was larger and the per move cost would have been larger even if the same number had been moved. As the costs include these other expenditures, they may actually be closer to the true private costs of moving plus search than the out-of-pocket expenditures plus foregone earnings reported by Osburn.

The services provided by mobility include: finding the job—the cost of search; bringing the worker for an interview—also a cost of search; paying for a physical examination, if required; making sure of a place to live; and financing the move, including subsistence until a paycheck is received. An individual would have to go through and finance all of these steps in a change of job location. In fact, the Phase I cost of **$306** is not greatly different than the nonwhite average of **$283**, including foregone earnings, in the Osburn study. Even though a family can move itself and its belongings from eastern North Carolina to piedmont North Carolina for less than **$75**, to say that a family would require a minimum of **$300** in resources to make the move does not appear outlandish.

The Phase II costs are considerably higher. The returnee rate and the general unhappiness of some

TABLE 3.—*Costs of relocating two groups of rural poor* [1]

Costs	Phase I (274 moved)	Phase II (219 moved)	Total
Administrative	$47,571.00	$60,771.39	$108,342.39
Direct	83,918.00	137,732.21	221,650.21
Total	131,489.00	198,503.60	329,992.60
Average administrative	173.62	277.49	219.76
Average direct	306.27	628.91	449.59
Average total	479.89	906.41	669.36

[1] From N.C. Fund Mobility Project.

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* Some evidence which is not a matter of public record from a similar relocation project at Tuskegee Institute would indicate that the average expenditure per family was in the neighborhood of **$100** to **$115** for subsistence, travel, and dependency allowance.

of the relocatees in Phase I made the provision of more counseling services mandatory in Phase II. In many instances the adjustment problems for the relocatees were severe. The adjustment problems cannot be gone into at this time, but they clearly affect the valuation of costs and returns to migration. If the persons moved do not stay, some of the potential gain is lost. If the relocatees impose costs on their neighbors, employers, or fellow employees, the social cost of moving is higher than indicated. For these reasons more attention was given to counseling and solving housing and other personal problems in Phase II. The experience of the N. C. Fund Mobility Program would indicate that looking only at the out-of-pocket expenses to move versus the nonfarm earnings potential may seriously underestimate the size of the investment required to increase the productivity of certain groups of the rural poor.

Evidence reported by Bishop (*2*) puts the direct cost of moving in Europe at roughly the same levels as Osburn's study. The direct costs, which are publicly supported in Sweden, would appear to be in the neighborhood of $100. In France, costs—including an allowance for adjustment of up to 6 months—are around $160.

The Function of the Capital Market

If the costs of a spatial move to take advantage of income differentials are as little as shown and the returns are anywhere near as large as indicated, an immediate question is: Why has not the private sector been making loans to the rural poor to facilitate moving.[9] There are several immediate answers.

As we have seen, the existence of the differential depends on aggregate demand. One cannot blame private lenders for not facilitating moves during periods when unemployment inhibits them, or during periods where considerable uncertainty exists about the permanency of the differential.

The group most in need of borrowed funds is that characterized by low income whose internal resources are too meager to finance a move. These are exactly the persons who cannot put up collateral, and who present a high risk of default. It would be surprising if lenders would lend funds to such persons for the express purpose of physically removing themselves from the lender.

The risk of default is probably less for a group of lenders taken as a whole than it is for a single lender. The variance of the expected returns facing an individual lender is simply larger than that facing the group. A possible attack on the problem of equating the private and social returns from mobility would be a risk pooling program that changed the cost of borrowing to private lenders and borrowers. The pilot mobility project of the U.S. Department of Labor incorporated in part a feature of such a program by offering combinations of loans and grants.

In addition to changing resource allocation such a program would have income redistribution effects. A program of this kind would have to be considered an alternative to other income redistribution schemes.

Some Benefit-Cost Complications

In principle the benefit-cost framework is straightforward. One sums up the costs and finds their present value, finds the present value of the future income stream, and compares the two. These calculations, of course, require an interest rate, and the choice of the appropriate interest rate has presented many evaluation problems for public projects. An alternative is to compute the internal rate of return on the investment, i.e., find the interest rate that equates the two present values.

Despite the simplicity of the principles of calculation, the application of the benefit-cost framework to the mobility program abounds in empirical problems. Such problems are discussed in this section.

Real Versus Apparent Income Differences

Any rural to nonrural move involves a problem of evaluating the nonmarket returns from farming. There are not simply the psychic costs of leaving an occupation. They include the value of home-produced food and shelter. For some groups the relative size of this return is very small, but for the rural poor it may be very large.

Conceptually, it would be impossible to specify exactly the changes in real incomes from a farm to nonfarm move without knowing the utility functions of the persons involved. A different bundle of goods will be consumed in the two areas, and we have no way to evaluate the new goods in the old area. The problem is further confounded with a new mix of public goods available. Police and fire protection, quality of streets, water, and sewage disposal are all presumed to be better in urban areas. More importantly, perhaps, closeness and quality of schools are likely to be improved in the urban areas.[10]

Offsetting the expected increase in consumption from these services are the possible diseconomies from urban slum-type dwelling. While no real quantification of such diseconomies is available, the possibility exists that a real resource cost is involved. In any event, the lowest income group of farm to nonfarm moves would be most likely to bear part of this cost. The budget constraint for the lowest paid workers would require them to occupy the lowest priced housing. In addition, of course, there may be racial discrimination in housing.

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[9] There is no direct evidence on the extent of loans for the purpose of moving. I am assuming that such loans are quite limited at lower income levels.

[10] Some evidence from West Virginia and Pennsylvania indicates that there are economies of size in the provision of public goods in cities in the sense that as population density increases per capita expenditure decreases for the services. (See Dillman (*3*).)

The N. C. Fund Mobility Project took the diseconomies possibility into account by moving persons only to areas where "suitable" housing could be found. The economic meaning of this decision would be that the supply price of arbitrarily judged quality was less than or equal to some bid price budgeted. It should be noted that this procedure is only available to the individual and to the small pilot project at the margin. The price of housing services is determined by market forces, and larger scale movements will affect the demand schedule for housing services in each area.

Even if we ignore the problems of shifting market baskets and public goods, we still do not have a straightforward problem of evaluating real income. The imputation for shelter will vary for different tenure classes. An owner-operator would simply include in his asset structure the value of the farmhouse. Midwestern tenant farmers and southern sharecroppers in principle have the same imputation problem. If the lease is of the crop-share type then there is an implicit payment for household consumption of housing services and home-produced foods. While the principle is the same for tenants and sharecroppers there is considerable difference in the relative size of the value of household consumption. In calculating farm-nonfarm income differentials the value of housing and home-produced food will constitute a much larger share of farm income for the typical southern sharecropper than it will for the typical midwestern tenant.[11]

Some illustrative budgeting should demonstrate how large a factor this valuation problem might be: Compare a farm family that has a net cash income of $1,200 per year with an urban worker earning $2,800 per year. The latter income is that of a person working a 40-hour week at $1.40 per hour; the former is the maximum earnings that still allowed eligibility for the N. C. mobility program, and is roughly that of a sharecropper working between 3 and 4 acres of tobacco.[12]

If we impute $40 a month for rent and $200 a year for food we have a real income for the farm family of almost $1,900. The rent figure is conservative; urban rent is probably closer to $60 per month. There are no good estimates for the value of home-produced food, but one recent study for western North Carolina shows average value of home-produced food increasing as net farm income decreases, with an average for the lowest income group of over $500 per year.

From the urban income we must subtract transportation to and from work. This expenditure is presumed to be zero for the farm family as transportation appears on the production side and is charged to the crop enterprise. Put this figure at $100 per year. The apparent differential of $1,600 has been cut in half, and by increasing urban expenditures and increasing farm income by fairly small amounts the differential may entirely disappear.

In evaluating the North Carolina Fund Mobility Study we have used budgets similar to the above in examining the returnee problem. One further point with regard to the income differential is the cash flow. Typically, the farm income from a crop sale will come as cash (less marketing charges). Daily farm labor wages will be quoted as cash and that amount of cash will be paid. On the other hand, urban wages will typically show a differential between gross and take-home pay. The North Carolina experience has shown that an information gap exists in regard to this differential. Some workers have felt misinformed when the cash they received was less than the quoted rate. This is in part, of course, a money illusion and could be alleviated through educational efforts concerning social security, health and life insurance, etc. However, there is a further meaningful hypothesis that can be adduced to explain behavior with regard to income differentials—the rural poor have higher discount rates than the rest of society.

Rural-Urban Differences in Internal Discount Rates

One would expect that the lower the educational and income level the less meaningful is the future and therefore there is less investment in more education, training, etc. In addition, I would assert that certain types of farmwork incorporate a short planning horizon. Sharecrop leases are on an annual basis; the horizon, therefore, may be as short as 9 months. Hired farm labor is also involved in a production process which has a period of production of less than a year. Actually, many of the production decisions are made on a much shorter basis than a crop year. These workers have no investment in land and little if any in production capital. The major investment decisions they would make would probably involve consumer durables, automobiles, refrigerators, etc.

Some mobility workers have been puzzled by the little value attached to education and some of the amenities of urban life. If, in fact, the discount rate exceeds 100 percent per year for these people, it is not surprising they view an investment in a move differently from other people. Expected longrun earnings is not a meaningful concept if an annual differential of $500 coming in $10-a-week increments has a present value of less than $500 when viewed at the start of the year.

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[11] In general, one would expect this same proportionality difference to appear also on the other side of the ledger in the nonfarm opportunity costs. Typically, a midwestern tenant would have more education and a higher skill level than the southern sharecropper and therefore his expected nonfarm income would be higher. The imputed value for the former is thus a lower proportion of either farm or nonfarm income.

[12] The average allotment in 1965 was approximately 4.0 acres. Average yield was approximately 1,720 lbs. per acre. Budget studies indicate a net return of approximately $800 per acre at current prices over variable expenses less labor.

There are really no data yet to test this hypothesis or to calculate the implied discount rate, but the behavior of some workers contacted by the mobility project is consistent with the hypothesis. One has to be very careful in examining the issue. Not all departures from rural areas have been voluntary in the sense that a deliberate decision to disinvest in agriculture has been made. In some areas opportunities for sharecropping and hired farm labor have shrunk so rapidly that the choice is to move to other farming areas or to an urban area. Apparently, the bulk of the choices have been of the latter type, and we witness the mass movements of largely Negro ex-farmworkers to northern cities.

This movement is not inconsistent with the high discount hypothesis. In fact, the large discount rate could help explain choice of location. With little capital to invest in search, a farmworker faced with a sharp decline in demand for his services will tend to move where friends and relatives have preceded him. A high internal discount rate would lead him to dismiss cost and returns differences between cities. A month's employment will appear the same in all locations despite the fact the longrun costs of living in one location may greatly exceed those in another because of crowding in slums and other costs.

I do not mean to offer the above as a complete explanation. Obviously, such things as capital to invest, information flows, and racial discrimination are important in choice of place and occupation. The conjecture is that if we could hold constant such things as racial discrimination, we would find the rural poor still having a lower rate of investment than other groups in such things as search, training, spatial moves, etc. If this conjecture be true it provides an economic framework for looking at certain social problems. Some behavior that looks irrational may be a question of taste and may still be encompassed by a general theory of choice. The rural poor probably lack information about alternatives, but within their constrained information they are not necessarily willfully and stupidly violating utility maximizing principles.

This discount rate hypothesis does not contradict the assertion of Schultz that farming is an inferior occupation for the Negro (*10*). He argues that the heritage of the southern Negro is such that his taste for farming will make any urban job preferable. The discount hypothesis simply says that some Negroes (and Indians) will stay or return to rural areas when superficial calculations show a positive return to be made in nonrural areas because the present value of the income difference may be less than it appears. Some individuals with a high enough discount rate could actually be giving up present value when they leave agriculture, as the inferior hypothesis suggests.

Other External Problems

In addition to a heritage of ignorance concerning alternative opportunities the rural poor inherit problems of physical and mental health where the social cost may exceed the private costs of treatment.

Physical health is easier to analyze. Mental health problems are really open-ended, as some behavior may be ascribed either to lack of information (an education problem) or to irrationality (a mental health problem).

The same capital restraints and high discount rates that lead the rural poor to "underinvest" in spatial mobility and occupational choice would lead them to "underinvest" in physical and mental health. A planning horizon of less than a year makes many investments in health "unprofitable" from a production standpoint. Thus, even if the budget constraint of the rural poor permitted a larger current investment in health, they might view the discounted present values differently from other people.

Returns to Migration

Some of the problems in evaluating returns to migration have already been discussed in the sections on costs, real versus apparent income differences, and varying discount rates. Some further information on returns from the mobility program are discussed in the current section. Table 4 contains information on costs and returns from the program.

To calculate returns, the relocatees are divided into two groups—stayees and returnees. The costs for stayees are the direct costs of the program plus any foregone earnings of the group. This latter cost will be small, as a requirement for inclusion into the program was either that a person be unemployed or a rural resident with an income of less than $1,200 a year. The costs of the returnees are the direct costs of the program, foregone earnings, cost of returning (estimated at $75 per worker), and the foregone earnings of returning.

The returns for the two groups are as follows: For the stayees, the returns are the difference in earnings between the two locations (on an annual basis). Again, the requirements for eligibility make this a large sum, as the difference in many cases is simply the new earnings. The returns for the returnees are the earnings now less the earnings before the move if a person has changed occupations. That is, if a person was moved, returned, and either became unemployed or returned to farm labor, he had no imputed returns from the program. If a person returned but now went into nonfarm work in the old location, he was accorded some return.

As no complete enumeration had been made, the returns in table 4 are estimated from a sample of 50 in each phase. The returns therefore do not represent a complete cost-benefit accounting of the program.

Several things are noteworthy from these calculations. The total costs of the program apparently could be recouped in the first year. That is, the returns to the individuals involved in the first year exceed the costs of the program.

There is a positive monetary return to the returnees from the program. A large enough proportion of the returnees become employed to make the returns greater than zero.

One way of looking at this returnee phenomenon is that the mobility program is in part a substitute for a training program. There are jobs in the home area, but these persons lack nonfarmwork experience and are not as desirable employees as persons with such experience. The relocation project provides them with work experience and when they return to the home area they are more desirable, and a large proportion of them can become employed at the going wage.[13]

These data can also be used to evaluate the added ancillary services of Phase II. The average difference in income for stayees over returnees was $337 in Phase I, but was $1,168 in Phase II. On the average, then, the added average expenditure of $323 for Phase II increased the staying rate and thereby increased average returns by $831. Again, these figures are mainly illustrative, but indicate what a complete accounting should show.

Income Distribution Effects

The resource allocation effects of human migration have been examined. If all moves are voluntary and undertaken in response to market phenomena that is the end of it. As we have seen, there may be second order effects for groups such as the rural poor where information is lacking or where the private capital market is unwilling to finance moves outside the area. There is still another effect that must be considered—income (wealth) redistribution. I have pointed out elsewhere (5) that if all moves are voluntary there is no presumption of any particular direction or magnitude of personal income distribution changes from labor mobility. To be sure, there are successes and mistakes with attendant capital gains and losses, but so are there with investments in physical capital, or education, or any other investment. That is, there is no presumption that a mover changes his relative position with respect to the personal distribution of income. However, the aggregate of moves may impose gains or losses on nonmovers, and if the problem involves investing public money in spatial mobility this income distribution problem would have to be considered.

A spatial reallocation of economic activity may well affect the privately held capital of nonmovers as well as movers. A rapid depletion of population clearly will affect the business activity and prospects of businessmen in the area. If the movement is diverse to other areas then the gains will be many small gains to compare with a few large losses. Public policy that affects mobility by changing the costs (prices) as seen by certain groups will also change the existing income distribution.

Another facet of the income distribution problem involving the specific group of the rural poor is that they may become taxpayers rather than tax receivers. Consider the group of low income rural residents. If they are not landowners, they pay little in the way of either property tax or income tax. While there is little if any straight "welfare"

TABLE 4.—*Costs and returns for relocating workers* [1]

Items compared	Phase I		Phase II	
	Costs	Returns	Costs	Returns
Stayees:				
Foregone earnings	$ 1,041.31	....	$ 1,028.70	
Direct costs	31,049.66	....	79,884.68	
Total	32,090.97	$293,277.74	80,913.38	$363,688.63
Returnees:				
Foregone earnings	1,783.63	....	745.20	
Direct costs	52,868.34	....	57,847.53	
Costs of returning	12,975.00	....	6,900.00	
Foregone earnings to return	11,418.00	....	6,013.12	
Total	79,044.97	129,230.10	71,505.85	66,000.00
Grand total	$111,135.94	$422,507.84	$152,419.23	$429,688.63

[1] From N.C. Fund Mobility Project (50 observations in each phase).

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[13] Such an analysis implies that the opportunity cost of a mobility program is a training program that yields some minimal experience such as keeping regular work hours, how to get along with a supervisor, etc.

paid to the able-bodied male workers, they may receive surplus food, and they are potential demanders of all the public services such as schools, police and fire protection, public health, etc. If these persons now receive a higher income they will now pay a higher tax. If the resource allocation effect of an investment in mobility is to increase output at the margin, it will also affect income distribution.

Actually computing the changes indicated would become extremely complicated. By making a spatial move an additional factor comes into play. Persons may cross tax jurisdiction lines. Total tax collections are potentially higher, but the increases in collections relative to services rendered may be greater in one area than the decrease in services relative to the decrease in taxes in another area. Thus, there may be an external effect from the resource reallocation that makes the social returns greater or less than the private returns, if local tax receipts and expenditures are not uniform and based on the marginal cost of the services.

Summary and Conclusions

Some small-scale and highly tentative empirical results on the costs and returns to mobility of labor have been examined. On the average people do not spend a great deal to move about in actually changing jobs. The out-of-pocket expenses are under $100 for most moves of 100 miles or less. However, out-of-pocket costs understate the true costs by omitting foregone earnings, costs of search for new jobs, and, perhaps most importantly, psychic costs. The financial resources required by a family to move a hundred miles in North Carolina would appear to be closer to $300 if we include costs of search for both jobs and housing and living expenses incurred before being paid. This much or more per worker was invested in two groups of rural poor in eastern North Carolina.

Probably the most important constraint on movement of the rural poor is that of information. This constraint has two aspects: (1) information on job opportunities and (2) information on urban life in general. The rural poor form the group that is probably least likely to have access to job information; and, surprisingly, for our educated society, there are groups for whom the cultural gap between rural and urban life is of some magnitude.

The returns side of the ledger has been examined for a sample of migrants into two cities, and for two groups of rural poor whose move was financed by public funds. Both sets of returns are subject to many reservations, but they both indicate that the costs of the move can be recouped in a year or less. Such a finding implies a return much larger than other investments in human capital. Two implications of this large return would be that some groups may have quite high internal discount rates and that the psychic costs of leaving a particular location may indeed be quite large.

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Chapter 15

Social and Cultural Problems of Migrants to Cities

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Introduction

In this paper we will consider a variety of social and psychological aspects of the typical housing situations of the urban poor and the aspirations the urban poor have for more satisfactory housing. Special attention will be paid to situations and aspirations of the poor migrants to the city, as the status of migrant gives a different emphasis or quality to housing needs and aspirations compared to the situation of those with longer residence in the city. However, because being poor has important consequences that are quite similar for those who are new to the city and those who are older residents, we will see that the fact of being a recent migrant plays a relatively minor role compared to that of low socioeconomic status.

As many observers have noted, the category "poor" is in many ways an arbitrary one based as it is on fairly tenuous criteria about a minimum standard of living for families of various sizes. In order to make most meaningful the use of sociological and social psychological research in this paper, it will be more useful to speak of "lower class" people rather than of the poor. Much research suggests that a concept of lower class has a kind of sociological reality in describing a social group and their way of life that the concept of "poor" does not have. In general the term "lower class" refers to that group in the population in which wage earners have unskilled occupations or semiskilled occupations which are quite vulnerable to unsteady employment and in which fairly regular periods of unemployment can be expected. The lower class as a group is also characterized by relatively low educational achievement. With the exception of some of the aged poor, almost all those who are categorized as poor by the Social Security Administration standards would be classified as lower class on the basis of occupation and education. But the lower class will include others whose income, at least from time to time, will place them above the current poverty standards.

This highlights an important fact for anyone concerned with the problem of poverty. Often those just above the current poverty line are not in a significantly different social situation than those who are somewhat below the poverty line. Particularly if we think of the crux of the situation of being poor as having to do with *vulnerability* to a number of untoward consequences of their situation—such as unemployment, family disruption, low educational achievement, and the like—it becomes apparent that a broad group of persons at the bottom of the socioeconomic hierarchy, perhaps some 25 to 30 percent of families, are in this kind of vulnerable situation.

Elsewhere I have suggested that this vulnerability results from the relative deprivation of being excluded from participation in conventional society and the enjoyment of its benefits, more than from some absolute level of deprivation (*1*).[1] Thus, even though family incomes continue to rise for the country as a whole, as long as one group of families finds itself considerably below that median they are likely to find themselves in situations that are productive of a wide range of troubles. This has led some observers to suggest that the most meaningful standard of where the poverty line should be drawn will prove to be one that is phrased in terms of some proportion of the median family income (somewhere between two-thirds and one-half of the median family income at any given time); such a definition would come closer to encompassing the group that sociologists have called lower class in their studies of variations in style of life by social status.

The important group of contrast for understanding lower class behavior and aspirations is not the white-collar middle class, although it seems extremely difficult for social commentators to avoid this neat contrast. Rather, the important reference group in examining the problems and difficulties of lower class life is the so-called stable working class. We tend to forget that the largest social class group in this country is most meaningfully described by such a term as working class with its traditional reference to semiskilled and skilled manual work, the "blue-collar" occupations, and the growing number of "grey-collar" occupations that involve manual kinds of services. These are the true "average" Americans.

Since World War II they have experienced considerable increase in their level of affluence. The working class style of life bears many similarities to that of the white-collar middle class but is not identical with it. For at least 20 years social commentators have been expecting that working class people will "become more middle class" as their level of affluence rises, but most of the research that has investigated the changing life styles of the affluent working class group suggests that although there have been important shifts, these shifts have been in the direction of perfecting what working class people regard as "the good American life" and not in the direction of developing the more achievement-oriented and status conscious orientations that stand out for the middle class. From the point of view of anyone interested in lower class behavior and poverty, then, it is much more important to understand the ways in which lower class people fall short of the standards of working class life rather than to concentrate on what must be an essentially artificial contrast with middle class life (2).

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[1] Italic numbers in parentheses indicate references at the end of this paper.

This accords not only with the realities of the relative situation of lower class people but also with their aspirations. Much research suggests that the main life goals of lower class people have to do with somehow managing to achieve the satisfactions and securities that are available to stable working class providers and their families. Further, since we know from studies of social mobility that movement upward (or downward) in social status tends to be overwhelmingly one step up or down per generation, it is obvious that the destination of the overwhelming majority of lower class persons, should various "antipoverty" programs prove successful, would be the stable working class and not the middle class.

The migration of rural men and women to the city has historically been an important aspect of social mobility in the United States. The movement from the country to the city is not just, or perhaps even primarily, a movement from one kind of environment to another. Often that move is incidental to an effort at socioeconomic mobility—that is, to an effort to find a better, more prosperous, more secure, more gratifying way of life than is available in the rural home area. Our concern here is with one aspect of the improvement the migrant seeks in his move to the city, with the role of housing as one of the goods which the migrant hopes to realize by his move.

The Lower Class Situation

Before examining the housing needs and aspirations of the lower class, it is necessary to consider in some detail the other aspects of living one's life in a lower class world. Indeed, many of the difficulties that various housing programs have run into over the past years in trying to meet the housing needs of the lower class have arisen as a result of seeing the housing problem in isolation from the many other problems of lower class life. In this section we will be concerned first to describe the objective situations in which lower class people must make their lives and then to understand the ways in which they adapt to these situations. The ways people live represent their efforts to cope with the predicaments and opportunities they find in the world as they experience it. Thus, if we are to understand any particular kind of lower class behavior or to understand the aspirations of the lower class we must understand first the problems and the opportunities that their existential world presents them. Further, since migrants, who are our special concern here, come into ongoing lower class communities we must understand something about the pressures that those communities are likely to place upon the newcomer.

After having painted a general and somewhat abstract picture of the ongoing urban lower class community we can then take up in the latter part of this section the question of different kinds of lower class adaptation as they are affected by the ethnic status of being white or of one or another minority groups, since ethnic status often serves to mitigate or to compound the difficulties of lower class adaptation.

The World of the Lower Class

The stresses of lower class living

The lower class is defined by two tough facts of life as it is experienced from day to day and from birth to death. These are the facts of deprivation and of exclusion: The lower class is deprived because it is excluded from the ordinary run of average American working and middle class life, and it is excluded because it is deprived of the resources necessary to function in the institutions of the mainstream (which is, after all, working class, and not middle class) of American life. The most basic deprivation is of course the lack of an adequate family income, but from this deprivation flows the sense so characteristic of lower class groups of not having the price of admission to participate in the many different kinds of rewards that ordinary society offers, some of which cost money, but also a good many others (education, for example) that do not.

But deprivation and exclusion are only the beginning of the troubles of the lower class, and sometimes in day-to-day life they do not really loom largest as barriers to a sense of reasonable satisfaction and security about who and where one is. The economic system and the system of ethnic segregation operate to concentrate lower class people into particular communities. In those communities, by virtue of their own troubles and by virtue of the indifference and exploitative attitudes of the rest of the society, there grows up a system of institutionalized pathology (to use Kenneth Clark's phrase) which characterizes ghettos and slum neighborhoods. It is this world, more than the objective facts of deprivation and exclusion per se, that impinges most directly on the lower class child as he grows up and on the lower class adult as he lives from day to day.

To illustrate this point about the direct, immediately experienced relevance of institutionalized pathology let us consider this example. From my own research and from a careful analysis of studies during the depression and after, I feel reasonably certain that the high proportion of lower class marriages which break up do so primarily because the husband is not able to be a stable wage earner. That is, they break up because of "deprivation," and the exclusion from ordinary life that follows from it. However, in a study in which a representative sample of women in a public housing project was asked why their marriages broke up, the women themselves did not give low income or their husbands' inability to find work as the most frequent reasons for their marriages breaking up. Instead, some 50 percent of them said that their marriages broke up because their husbands were unfaithful, played around in the streets or drank too much, and another 27 percent indicated that their marriages broke up because the husbands *wouldn't* work or *wouldn't* give them enough money. In other words, the fact that the marriages broke up was considered to be the fault of the husband, and not an unwilled result of living in highly depriving circumstances.

Perhaps this is just another way of saying that lower class people, no more than the rest of us, are not capable of being detached and impersonal about the events of their daily lives. But this is a very important fact because when such incidents are multiplied thousands of times in the interactions of husbands and wives, parents and their children, between friends and neighbors, and when this kind of individual faultfinding comes to dominate the contacts that lower class people have with the caretakers on whom they depend in social agencies, educational institutions, housing authorities, and the like, an institutionalized system exists in which lower class people are constantly subjected to "moral damage" in their interactions with others. Thus, the potential for an attack on one's moral worth is ever present for lower class people. Depending on their particular situations they learn to expect such attacks from other family members, from their peers, from their neighbors, and most predictably from the caretakers with whom they have contact.

But lower class people have responded to this reality of their lives with all of the resourcefulness and imaginativeness that human beings can bring to bear in dealing with their difficulties. Their mechanisms for coping with these dangers (as well as more obvious physical dangers and socioeconomic frustrations that come from their deprived and excluded existence) work in the sense that they are effective in maintaining daily lives that are for the most part tolerable, though seldom highly gratifying. At the same time, these mechanisms for coping with the dangers with which their world presents them also have a negative feedback into the system of social relations of the group in that they sometimes precipitate further problems for the individual and set problems of adaptations for others in the group and for outsiders. When social scientists speak of the tangle of pathology of ghetto and slum worlds they refer to these negative feedback effects of the adaptative mechanisms of lower class people, although social scientists are also aware that the same mechanisms may well be the only ones that are meaningfully available to the individual who grows up in a lower class world.

These ways of coping can be termed *strategies for survival*. Among the more important strategies of survival are:[2]

(1) The strategy of the *expressive life style*. In response to the fact that the individual derives little security and reward from his membership in a family which can provide for and protect him, or from his experiences in the institutions in which he is expected to achieve (the school, later the job), individuals develop an exploitative strategy toward others in which they seek to elicit rewards and support from those others by making themselves interesting and attractive so that they are better able to manipulate other people's behavior in ways that will provide them with some gratification.

In its benign forms the expressive style is what attracts so many middle class people to the lower class—the fun, the singing, the dancing, the exotic food, the lively language of the lower class often appeal to middle class people as reflecting somehow greater "naturalness," spontaneity and gratification of impulses. (Moralistic middle class persons, on the other hand, often condemn the same behavior as shiftless and immoral.) But underneath the apparent spontaneity, the expressive style of lower class people is deadly serious business. It is by virtue of their ability to manipulate others by making themselves interesting and dramatic that the individual has an opportunity to get some of the few rewards that are available to him—whether these be a gift of money, a gambling bet won, the affections of a girl, or the right to participate in a community of peers, to drink with them, bum around with them, gain status in their eyes. The individual learns by his expressive ability to "work game" on his peers, to "sound" on them, to "put them in a trick," thereby raising his status by lowering the other fellow's. While the expressive style is central to preserving the stability and sanity of many (particularly younger) members of the lower class, the pursuit of expressive and self-dramatizing goals often eventuates in behavior which makes trouble for the individual both from his own community and from representatives of conventional society. Dope addiction, drunkenness, illegitimacy, "spendthrift behavior," lack of interest in school on the part of adolescents—all can arise in part as a result of commitment to a strategy of "cool." For example, in Pruitt-Igoe some teenage boys drink and others smoke marijuana, in order to be able to loosen up enough to develop a "strong game" (*i.e.*, a really persuasive line with peers or girls).

(2) When the expressive strategy fails—because the individual cannot develop the required skills or because the audience is unappreciative—there is a great temptation to adopt a *violent strategy* in which you force others to give you what you need because you can't win it by working your game. In the violent strategy one takes because one cannot persuade others to give. The violent strategy is not a very popular one among lower class people, both because of the dangers that go with it and because lower class people

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[2] These survival strategies are described in more detail in the references cited under (3).

generally disapprove of attacking and taking from others by force. Therefore, those who adopt the violent strategy require justification, whether at such a minor level as a teenage girl shoplifting in order to have a pretty sweater to wear to school, or at the major level of one partner shooting his spouse because of infidelity. There is little really coldblooded violence either toward persons or property in the slum world; most of it is undertaken out of a sense of desperation, a sense of deep insult to the self either from the specific persons who are attacked or from the world in general. Yet this strategy does not seem as distant and impossible to them as it does to the more prosperous. Indeed, violence may seem the only proper or mature response to the direct or impending attack by others.

(3) In the *depressive strategy* goals are increasingly constricted to the bare necessities for survival (not as a social being, but simply as an organism). This is the strategy of "I don't bother anybody and I hope nobody's gonna bother me; I'm simply going through the motions of keeping body (but not soul) together." Apparently this strategy, a strategy of retreat and self-isolation, is one that is adopted by more and more lower class men and women as they grow older, as the payoffs from more expensive strategies begin to decline. Along the way many lower class people follow mixed strategies alternating among the excitement of the expressive style, the desperation of the violent style, and the deadness of the depressed style.

(4) Finally, there is the *strategy of mobility*; here the effort is to somehow get a purchase on the regular way of life of working or middle class people and institutions, to become part of that, to replace exclusion with inclusion, and to win the rewards that are available in the system. Through the life cycle this sometimes appears as a case of "settling down" in which a young man or woman who has been much involved in expressive styles begins to seek greater stability and buckle down to putting together a reasonable approximation of a stable working class way of life. At other times withdrawal is the main technique. The individual or family withdraws from the interesting but dangerous circle of lower class social activity, perhaps to begin to accumulate some of the goods of more ordinary style of life, perhaps only to avoid the punishment of the lower class style, and as an effort to insure that at least the children will have a chance to finish school and catch on to a more stable job and family career.

The goals of the lower class

It is from observations such as these as well as from interviews about lower class people's hopes and aspirations that one learns that lower class styles of life are pursued not because they are viewed as intrinsically desirable, but because the people involved *feel* constrained to act in those ways given the deprivations and threats to which they find themselves subject. *The lower class does not have a separate system of ultimate values. Lower class people do not really "reject middle class values." It is simply that their whole experience of life teaches them that it is impossible to achieve a viable sense of self-esteem in terms of those values* and therefore they turn elsewhere—to expressiveness or violence for a sense of self-esteem, or to depression and self-constriction to ward off the pain of knowing that one cannot be as he wants to be.

But lower class people are intimately alive to how things might be different. They know what they would like if only they had the resources of the average working class man—they would want a quiet, rather "square" life in a quiet neighborhood far from the dangers, seductions, and insults of the world in which they live. There is no preference or intrinsic value attached to matrifocal families, or a high incidence of premarital sexual relations resulting in unwanted pregnancies, or living alone as a deserted or divorced wife and having a boyfriend because you're afraid that if you remarry your ADC will be cut off and your new husband will not prove a stable provider. These are ways of life that develop when there seems to be no other choice. But because there are a few people around in the immediate neighborhood who are more fortunate and live a more stable life and because they know from observation how the other half lives, lower class people are not easily confused between how they must live and how they would like to live (*4*).

The White Lower Class Migrant

The white rural migrant is typically fated for quite different experiences when he moves to the city compared to the minority group migrant. He does not necessarily find life easy in the city nor are the streets paved with gold to him. But for the white migrant there is still a great deal more truth to the traditional notion of slum areas as providing a place for making the rural to urban transition, for learning city ways in a neighborhood in which standards are not too strict, and for having the protection that comes from a more tolerant environment than the more prosperous working and middle class might represent.

In general, however, white migrants are much less likely to live in the kind of concentrated lower class neighborhoods described in the previous section than are minority group migrants. White lower class areas tend to be fairly small and to be mixed in with larger neighborhoods that are dominated by the working class. In such large working class neighborhoods a block or two here and there may be run down and slummy but one no longer finds in most American cities the very large, heavily lower class, white settlements that characterized these same cities during periods of heavy immigration from Europe. The prosperity of the rest of the white society has created a very different milieu for the white migrants who come in. Thus, in St. Louis in 1960 one could find only 2 white census tracts in which the median incomes fell below $3,500 a year while in contrast there were 20 predominantly Negro census tracts in which the median incomes were that low, and these tracts contained the great majority of St. Louis Negroes. Thus, with some exceptions, the white rural migrant is much less likely to move into a slum environment that is threatening to him in the same ways that the minority group ghetto tends to be threatening. He is likely to experience a much higher level of a sense of personal security in his neighborhoods than the minority migrant.

Equally i[illegible]t, for the past few years at least, demand [illegible]or, even relatively unskilled labor, in most metropolitan areas has been fairly heavy. This has meant that, especially in contrast to the opportunities in the areas from which they come, white migrants have found the city economically rewarding. At least for relatively young men and women it has proved fairly easy both to find work and to shift from job to job until the individual finds work that meets his needs tolerably well. Thus, Harwood in a study of the uptown area of Chicago, a major entry point for southern white migrants, found the migrants rather uniformly expressing gratification at the number of jobs that were available and at the relatively high rates of pay. Harwood characterized their perception of the economic situation in the city as follows:[3]

> Southern whites . . . frequently compare their economic situation and adjustment to Chicago to what they have been used to in the south. A hardy optimism and strong feelings of economic self-sufficiency appeared in the responses to interview items . . . .

Harwood's respondents made comments such as these:

> "I had thought about moving back to Mississippi, but then I thought about the work. The only thing that pays like Chicago is hauling whiskey and I couldn't do that."
>
> "It's a workingman's paradise. There are good jobs. I don't want to work in no coal mines, and if I went back to Virginia that's what I'd be doing."
>
> "If you can do anything at all, you can always get a job in Chicago. Even if you don't know any kind of work, Chicago is better than Kentucky or Ohio. . . ."

These two factors—a less pathological neighborhood environment and more economic opportunity—tend to result in a rather hopeful orientation on the part of migrants to their new home. They tend to see the city as a place they can exploit to achieve their goals. Though they may not be ecstatic about the city way of life they see the city as providing them with many opportunities for realizing their aspirations. Harwood observes:

> Although most male respondents felt their economic situation had improved considerably and generally praised the work opportunities in Chicago, this did not mean that they liked the city. Most found the living conditions and uptown unpleasant. Many stated they would return south if they could obtain jobs down there at the pay they were able to earn in Chicago.

On the other hand, white migrants seem to express a strong attachment to the rural areas from which they come and they have a sense that if the going gets rough they can always go home again. They have a sense of their rural home areas as basically good places which they have left primarily because there was not enough economic opportunity to enable them to live decently. However, it is always possible to save a little money and go back home and live cheaply if things get too bad in the city or when one's family is reared and the economic need is not as great. It is not necessary to assume that many rural migrants will actually do this; the mere fact of conceiving of the rural home as an attractive place and as a place where one is an acceptable, indeed often a valued, person also contributes to the sense of having available options. The white rural migrant is not trapped in the city except by his need for money.

All of this can be summed up by saying that the white rural migrant has a sense of himself, of his own identity, as a member of the majority ethnic group. Though he is low on the economic totem pole he conceives of himself as being in his own country, of his rural home as properly his own territory, and of the city as potentially his own territory, and in any case as available to him for exploitation. While it is true that white rural migrants often have a sense of alienation from city ways, they regard it implicitly as their right to pursue their aspirations in the city. In this sense, despite the negative stereotypes that some northern urban dwellers have of "hillbillies" it seems that from the migrants' own point of view there is relatively little tendency to consider themselves as making up a "minority" group.

For all of these reasons there is a much greater tendency for white rural migrants to regard the neighborhoods in which they first live in the city as relatively temporary. They are able realistically to imagine themselves having stable enough employment at high enough wages to move out into stable working class areas as they come to feel more at home in the city. This temporary orientation, an orientation to further geographical and social mobility within the confines of the metropolitan area, has a twin aspect. Not only is there the sense of fewer barriers to movement, of minimal resistance on the part of other neighborhoods to them once they have economic means, but there also seems to be relatively little development in white lower class areas of a sense of commitment or attachment to the area itself. In this sense rural whites do not seem to create "urban villages" in the city the way some earlier immigrants have. There is no valued ethnic cultural heritage to preserve as seems to have been true of some immigrant groups such as the Italians, the Poles, the Irish, in a much earlier period. Instead, white rural migrants tend to be highly individualistic in their orientation. While they may enjoy the company of other migrants and feel more comfortable with them because they understand the world in similar ways, this greater social comfort is not formed into a sense of cultural commitment to "our way of life." The individual finds it much easier to move by stages into more conventional working class neighborhoods in which ethnicity is irrelevant either because the sense of ethnic kinship has been lost or because there is tolerance for ethnic heterogeneity as long as everyone is white.

Thus, for many white migrants the lower class world in which they first settle in the city is merely a way-station. Not everyone makes it on to the next, stable working class, station but the strong presumption is that that is possible. The possibilities of approximating (in either a relatively affluent or more restricted way) the working class style of life tends to protect rural white migrants from an experience of the city as heavily damaging or dangerous.

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[3] I have relied heavily on Harwood's study (2) since it is one of the few recent thorough studies of rural white migrants. In addition some of my observations are based on first impressions from an ongoing study of a white lower class area in St. Louis begun in August 1966, and directed by Alvin W. Wolfe and myself, under contract from the Office of Economic Opportunity.

The Minority Poor

The research that is available suggests that the situation of the minority poor migrant is markedly different from the pattern outlined above for the white migrant. We know the most about Negro migrants, and what is said below probably applies most closely to the situation of Negroes who move to the city but there is reason to believe that the situation of Puerto Rican and Mexican migrants is similar.

In the lower class ghetto most of the people around tend to be in the same socially and economically marginal situation as the migrant. There are too few stable working class families in the neighborhood to resist the dominant effect of lower class adaptations. As Clark describes the economic and social decay of the Dark Ghetto (6):

> The symptoms of lower class society afflict the dark ghettos of America—low aspiration, poor education, family instability, illegitimacy, unemployment, crime, drug addiction and alcoholism, frequent illness and early death. . . . The most concrete fact of the ghetto is its physical ugliness—the dirt, the filth, the neglect. . . . everywhere there are signs of fantasy, decay, abandonment, and defeat. The only constant characteristic is a sense of inadequacy. People seem to have given up in the little things that are so often the symbol of the larger things.

Thus, the social setting of the dominant working class neighborhoods in which white migrants tend to settle exerts a strain in the direction of more conventional functioning on the part of those migrants even when they are subject to pressures in the direction of lower class adaptations, or bring such adaptations with them from deprived rural settings. But in the Negro ghetto the strain is heavily in the direction of developing and perfecting lower class adaptations which, while they function to maintain a sense of identity and meaningfulness in day-to-day life, also tend to hamper adjustment in more conventional ways and inevitably to create difficulties and conflicts for oneself and others.

The ghetto has been sustained, of course, by both heavy pressures to maintain racial segregation and by the lack of economic opportunity for Negroes. Thus, while many American cities these days provide considerable economic opportunity for unskilled whites there seems to much less opportunity for unskilled and uneducated Negroes, and the jobs that Negroes do get hired for at that level tend to pay considerably less than the jobs that are open to comparable whites.

Thus, the Negro migrant to the city is much less likely to perceive the city as he gets to know it as a place of opportunity and a place that he can exploit at will for increasing levels of affluence. While for the Negro migrant, too, the city may seem superior economically to the rural setting, the improvement is not sufficient to make him regard the city as his oyster. He has not developed the same sense of the city as open to him and as providing many opportunities to satisfy his needs. Instead, he comes to see the ghetto itself as the main area available for his exploitation, and that exploitation is less in terms of opportunities for work and more in terms of the opportunities represented by the expressive life style described above. For the cumulative effects of the Negro's economic position in the city see (7).

In looking backward instead of forward the Negro is also in a very different position than the white. While the white looks back nostalgically to home, often enjoys visiting his rural home, and may from time to time move back there when things do not go well in the city or when things have gone so well that he can afford to take it easy for a while, the Negro much less often thinks of the rural area as an attractive and meaningful home. It seems likely that Negroes come to the city as much because of the sense of restriction and exploitation they feel in the country as because of the positive attractions of the city itself. While they may love and value the people they leave behind in the country, they do not have the same sense of the rural community as properly their own. Though both the country and the city may be dominated by whites, at least in the city the Negro discovers that he has more freedom to move around, and a larger community of participation that is insulated from whites by their relative indifference and by the greater recognition of Negro political autonomy in the cities.

The end result of the forces of the ghetto community, of the lack of economic opportunity, of the restricted and dominated identity which Negroes acquire both in the country and in the city, is that there is much less of an orientation to mobility, to moving up and out of the initial lower class position in the city. The Negro migrant is systematically guided by his experiences to view the ghetto as his permanent home rather than as a transitional way-station. While the white migrant has many reasons to see himself as moving on in the direction of more prosperous and stable working class life, the Negro migrant learns that he has arrived in the city to stay in the ghetto. In consequence, he is encouraged in his experience of day-to-day life to make the best adaptation he can to the life of the ghetto and that adaptation tends to reinforce limiting aspects of the lower class life style. He accommodates to unemployment or intermittent employment; he often learns that he must give up the aspiration of being the head of the family, leave his wife, provide partial support, perhaps, for his children or sometimes shift that support to the children of another woman whose boyfriend he becomes because he finds the relationship compatible as long as he does not have to assume the impossible burden of providing the sole support for a family.

Thus, while the white migrant has good prospects (always assuming that economic conditions continue to create heavy demand for his labor) for moving from a status of marginality in the city to one of stability in the working or (given somewhat more education) lower middle class, the great majority of Negro migrants are condemned to continuing marginality in the city, a marginality mitigated only by their ability to learn to play the game of one of the ghetto styles of adaptation, to defend themselves against the deprivations of middle class caretakers and lower class peers who are skilled at exploiting the greenhorn—for money, for sexual favors, for prestige.

The Special Housing Needs of the Migrant Poor

The migrant approaches the city tentatively. He often does not know whether he wants to stay. He does not know how well he is going to do in the city, how much he can make, how stable his job is going to be. He is reluctant to make commitments, therefore, that will tend to hamper him in his freedom of mobility. In addition, migrants generally do not look very good "on paper." That is, they often do not appeal to those who must extend them credit or to landlords who are selective in choice of tenants and who want to run a credit check on potential tenants. In short, migrants are marginal both by choice and by the circumstance of not having participated long enough in the complex of urban activities to have acquired the official status of more or less trustworthy persons. Migrants tend, therefore, both to seek out and to be guided toward those areas of the city in which housing is available to meet the needs and the resources of the marginal person.

When it is not possible to live with relatives they often seek furnished apartments which can be rented by the week. This maximizes their flexibility since they can vacate with no notice and they do not have to commit scarce or nonexistent resources to furniture, or buy furniture on installment from stores they distrust.

An interesting sidelight on this orientation is that there is reason to believe that migrants are disproportionately represented in the mobile home population, sometimes renting mobile homes (which are all furnished) and perhaps also sometimes buying them on the grounds that the home can always be moved if that seems desirable.

One unfortunate consequence of this orientation is that migrants tend to pay rather high rents for their housing. Very often migrants renting furnished apartments in transient areas of the city pay for their apartments as much as or more than they would need to pay in more settled stable working class areas for far superior housing. While it is undoubtedly true that a transient population tends to depreciate property more quickly than a stable population, it also seems likely that over time this adaptation on the part of the migrant probably interferes with his ability to move out and up in line with his aspirations simply because so much of his income is absorbed by renting the furnished apartment. Similarly, the fact that many migrants are "credentials poor," even when as a matter of fact they are economically fairly good risks, tends to restrict their housing choice and perhaps to artificially inflate the rents that landlords are able to charge them.

Other factors can interfere in the freedom of choice that migrants have even when they are able to pay for better accommodations than they actually obtain. For example, landlords are often unwilling to rent to families with a number of children, particularly when they perceive that the family is new to city living.

Another aspect of the temporary orientation that migrants often take to their housing has to do with the community. Just as they do not want housing which makes heavy demands on them for upkeep, for furnishing, for long-term leases, they do not want to live in communities which demand heavy commitments of them. Since their orientation to the city is an exploratory one, they prefer to live in communities which do not put heavy pressure on their members for social involvement, or for financial commitment to property and neighborhood activity. This often means that migrants do not seem to be "good neighbors," not so much because they "don't know any better" as because they think of their neighborhoods more as providing the conveniences of a hotel rather than the meaningfulness of a home. The migrant therefore appears as highly individualistic in his orientation, and tends to regard community commitment and participation as an unnecessary distraction.

Where migrants move into very stable communities, the kind of "urban villages" described by Gans and Fried, they often seem out of place to their neighbors. For this reason they may be more comfortable in neighborhoods where deterioration and poor community services are such that apparently no one any longer cares what the residents do as long as they pay their rent.

However, living in such a neighborhood tends to perpetuate the temporary transient orientation of the migrant since there is very little about the neighborhood that would encourage him to change this orientation. Indeed, he may experience some hostility from others around who would like to regard the neighborhood as a place where people care about their homes and about their blocks, and who want to change it to realize these wishes (*8*).

In a city in which there is a fairly good supply of housing at low rentals, even though that housing might be somewhat deteriorated by middle class standards, the special needs of the early migrants are probably fairly well served and there will be relatively little of a continuing housing problem, given an economic situation in which the migrants can gradually find stable and satisfactory employment and begin to acquire both the official credentials and the desire to move into more stable neighborhoods. The transition, in short, from new migrant who is looking around and learning how to earn and enjoy the benefits of the city will proceed in a fairly straightforward way.

However, where the low rental housing supply is heavily restricted, either in general or for migrants of particular ethnic groups, migrants tend to be pushed into communities of concentrated lower class living where landlords and other caretakers provide extremely poor service, and the family is vulnerable to numerous problematic stresses from the exploitative lower class community. This is basically the situation of the Negro migrant and of other minority group migrants. In this kind of situation there is little opportunity to break out and to find marginal housing in basically stable neighborhoods. The pressures and dangers of living in the lower class neighborhood subtract from the resources the family is able to muster, both economic and social, to move out. The ghetto, then, becomes a kind of frozen transient neighborhood in which a few people are on their way out, and families move instead from one part of the ghetto to another either because they are forced out by their inability to pay the rent or because they have gotten into too much trouble with the landlord, or in a desperate search for something better that always turns out to be only something about the same. When this happens the housing situation of the migrant is no different from that of the long-time resident of the city; both are caught in a situation in which they have very limited ability to purchase housing to meet their needs and are forced to meet those needs within neighborhoods that are slighted, ignored, exploited by those who live in them and by the rest of the society which insists on their maintenance.

In short, those housing needs that are distinctive to migrants are fairly simply related to the migrant's situation of trying to find his way in the city, to explore it before he makes any lasting commitments. Where there is ample economic opportunity for the migrant, he can generally meet these special needs, although he pays a premium for doing so. Where the economic prospects are not good he tends to be caught over time in the same vicious circle as that of more long-term lower class residents in the city.

Lower Class Housing Needs and Aspirations

In this section we will consider the social and psychological effects of lower class housing on the families who live in this housing and present a description of the kinds of problems that lower class people express when they talk about their housing. Then we will take up the question of the extent to which public housing programs are successful in meeting the needs of poor people for housing and discuss some of the ways in which public housing programs have tended to create problems at the same time that they have provided physically adequate housing. Finally we will consider the housing aspirations of lower class families and indicate how these aspirations often conflict with the prescriptions that housing planners and architects make to solve the housing needs of the lower class.

Major Foci of Housing Concern

Men live in a world which presents them with many threats to their security as well as with opportunities for gratification of their needs.[4] Housing has as its prime purpose the provision of shelter, which is protection from potentially damaging or unpleasant trauma or other stimuli. The most primitive level of evaluation of housing, therefore, has to do with the question of how adequately it shelters the individuals who abide in it from threats in their environment. Because the house is a refuge from noxious elements in the outside world, it serves people as a locale where they can regroup their energies for interaction with that outside world.

These conceptions of the house are readily generalized to the area around it, to the neighborhood. This fact is most readily perceived in the romanticized views people have about suburban living (*10*). The suburb, just as the village or the farm homestead, can be conceptualized as one large protecting and gratifying home. But the same can also be said of the city neighborhood, at least as a potentiality and as a wish, tenuously held in some situations, firmly established in others (*11*). Indeed, the physical barriers between inside and outside are not maintained when people talk of their attitudes and desires with respect to housing. Rather, they talk of the outside as an inevitable extension of the inside and of the inside as deeply affected by what goes on immediately outside.

When, as in the middle class, the battle to make the home a safe place has long been won, the home then has more central to its definition other functions which have to do with self-expression and self-realization. However, the poverty and cultural milieu of the lower class make the prime concern that of the home as a place of security, and the accomplishment of this goal is generally a very tenuous and incomplete one. In the established working class there is generally a somewhat greater degree of confidence in the house as providing shelter and security, although the hangovers of concern with a threatening lower class environment often are still operating in the ways working class people think about housing (*12*).

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[4] This section and the one following are condensed from an earlier article (9).

In figure 1, I have summarized the main differences in three orientations toward housing standards that are characteristic of three different consumer groups within the lower and working classes. I will elaborate below on the attitudes of the first group, the slum dwellers, whose primary focus in housing standards seems to be on the house as a shelter from both external and internal threat.

As context for this, however, let us look briefly at some of the characteristics of two working class groups. In our studies and in those of Gans and others of Boston's West End, we find one type of working class life style where families are content with much about their housing—even though it is "below standard" in the eyes of housing professionals—if the housing does provide security against the most blatant of threats (*13*). The traditional working class is likely to want to economize on housing in order to have money available to pursue other interests and needs. There will be efforts at the maintenance of the house or apartment, but not much interest in improvement of housing level. Instead there is an effort to create a pleasant and cozy home, where housework can be carried out conveniently. With respect to the immediate outside world the main emphasis is on a concern with the availability of a satisfying peer group life, with having neighbors who are similar, and with maintaining an easy access back and forth among people who are very well known. There is also a concern that the neighborhood be respectable enough—with respectability defined mainly in the negative, by the absence of "crumbs and bums." An emphasis on comfort and contentment ties together meanings having to do with both the inside and the outside.

Out of the increasing prosperity of the working class has grown a different orientation toward housing on the part of the second group which we can characterize as modern instead of traditional. Here there is a great emphasis on owning one's home rather than enriching a landlord. Along with the acquisition of a home and yard goes an elaboration of the inside of the house in such a way as not only to further develop the idea of a pleasant and cozy home, but also to add new elements with emphasis on having a nicely decorated living room or family room, a home which more closely approximates a standard of all-American affluence. One of the dominant themes of the modern working class life style is that of having arrived in the mainstream of American life, of no longer being simply "poor but honest" workers. It is in the service of this goal that we find these elaborations in the meaning of the house and its environs.

In both working class groups, as the interior of the home more closely approximates notions of a decent standard, we find a decline in concerns expressed by inhabitants with sources of threat from within and a shift toward concerns about a threatening outside world—a desire to make the neighborhood secure against the incursions of lower class people who might rob or perpetrate violence of one kind or another.

As we shift our focus from the stable working class to the lower class, the poor, we find a very different picture. In the lower class we find a great many very real threats to security. The threatening world of the lower class comes to be absorbed into a world view which generalizes the belief that the environment is threatening more than it is rewarding—that rewards reflect the infrequent working of good luck and that danger is endemic (*14*). Any close acquaintance with the ongoing life of lower class people impresses one with their anxious alienation from the larger world, from the middle class to be sure, but from the majority of their peers as well. Lower class people often seem isolated and to have but tenuous participation in a community of known and valued peers. They are ever aware of the presence of strangers who tend to be seen as potentially dangerous. While they do seek to create a gratifying peer group society, these groups tend

FIGURE 1.—*Variations in housing standards within the lower and working classes*

Focus of housing standard	Core consumer group	Most pressing needs in housing	
		Inside the house	Outside environs
Shelter	Slum dwellers	Enough room. Absence of noxious or dangerous elements.	Absence of external threats. Availability of minimum community services.
Expressive elaboration	Traditional working class	Creating a pleasant, cozy home with major conveniences.	Availability of a satisfying peer group society and a "respectable enough" neighborhood.
All-American affluence	Modern working class	Elaboration of the above along the line of a more complex material culture.	Construction of the all-American house style in terms of "outdoor living," "good" community services.

to be unstable and readily fragmented. Even the heavy reliance on relatives as the core of a personal community does not do away with the dangers which others may bring. As Miller has perceptively noted, "trouble" is one of the major focal concerns in the lower class world view (*15*). A home to which one could retreat from such an insecure world would be of great value, but for lower class people such a home is not easy to come by. In part, this is due to the fact that one's own family members themselves often make trouble or bring it into the home, but even more important it is because it seems very difficult to create a home and an immediate environment that actually does shut out danger (*16*).

The Dangers Against Which a Home Should Shelter

It is possible to abstract a great many dangers that have some relation to housing and its location. The location or the immediate environment is as important as the house itself, since lower class people are aware that life inside is much affected by the life just outside.

In figure 2 are summarized the main kinds of danger which seem to be related to housing one way or another. It is apparent that these dangers have two immediate sources, human and nonhuman, and that the consequences that are feared from these sources usually represent a complex amalgam of physical, interpersonal, and moral damage to the individual and his family. Let us look first at the various sources of danger and then at the overlapping consequences feared from these damages.

There is nothing unfamiliar about the nonhuman sources of danger. They represent a sad catalog of threats apparent in any journalist's account of slum living (*17*). That we become used to the catalog, however, should not obscure the fact that these dangers are very real to many lower class families. Rats and other vermin are ever present companions in most big city slums. From the sense of relief which residents in public housing often experience on this score, it is apparent that slum dwellers are not indifferent to the presence of rats in their homes. Poisons may be a danger, sometimes from lead-base paints used on surfaces which slum toddlers may chew. Fires in slum areas are not uncommon, and even in a supposedly well-designed public housing project children may repeatedly burn themselves on uncovered steampipe risers. In slums where the tenant supplies his own heating there is always the possibility of a very cold apartment because of no money, or, indeed, of freezing to death (as we were told by one respondent whose friend fell into an alcoholic sleep without turning on the heater). Insufficiently protected heights, as in one public housing project, may lead to deaths when children fall out windows or adults fall down elevator shafts. Thin walls in the apartment may expose a family to more of its neighbor's goings-on than is comfortable to hear. Finally, the very cost of the dwelling itself can represent a danger in that it leaves too little money for other things needed to keep body and soul together.

FIGURE 2.—*A taxonomy of dangers in the lower class home and environs: Each of these can involve physical, interpersonal, and moral consequences*

Source of danger	
Nonhuman	Human
Rats and other vermin Poisons Fire and burning Freezing and cold Poor plumbing Dangerous electrical wiring Trash (broken glass, cans, etc.) Insufficiently protected heights Other aspects of poorly designed or deteriorated structures (e.g., thin walls) Cost of dwelling	Violence to self and possessions: Assault Fighting and beating Rape Objects thrown or dropped Stealing Verbal Hostility, Shaming, Exploitation: Own family Neighbors Caretakers: Outsiders Attractive alternatives that wean oneself or valued others away from a stable life

That lower class people grow up in a world like this and live in it does not mean that they are indifferent to it—nor that its toll is only that of possible physical damage in injury, illness, incapacity, or death. Because these potentialities and events are interpreted and take on symbolic significance, and because lower class people make some efforts to cope with them, inevitably there are also effects on their interpersonal relationships and on their moral conceptions of themselves and their worlds.

The most obvious human source of danger has to do with violence directed by others against oneself and one's possessions. Lower class people are concerned with being assaulted, being damaged, being drawn into fights, being beaten, being raped. In high-rise public housing projects in particular, it is always possible for juveniles to throw or drop things from windows which can hurt or kill, and if this pattern takes hold it is a constant source of potential danger. Similarly, people may rob anywhere—apartment, laundry room, corridor.

Aside from this kind of direct violence, there is the more pervasive ever-present potentiality for symbolic violence to the self and that which is identified with the self—by verbal hostility, the shaming and exploitation expressed by others who make up one's world. A source of such violence, shaming, or exploitation may be within one's own family—from children, spouse, siblings, parents—and often is. It seems very likely that crowding tends to encourage such symbolic violence to the self but certainly crowding is not the only factor since we also find this kind of threat in uncrowded public housing quarters (*18*). Most real and immediate to lower class people, however, seems to be the potentiality for symbolic destructiveness by their neighbors. Lower class people seem ever on guard toward their neighbors, even ones with whom they become well-acquainted and would count as their friends. This suspiciousness is directed often at juveniles and young adults whom older people tend to regard as almost uncontrollable. It is important to note that while one may and does engage in this kind of behavior oneself, this is no guarantee that the individual does not fear and condemn the behavior when engaged in by others. For example, one woman whose family was evicted from a public housing project because her children were troublemakers thought, before she knew that her family was included among the 20 families thus evicted, that the evictions were a good thing because there were too many people around who caused trouble.

Symbolic violence on the part of caretakers (all those whose occupations bring them into contact with lower class people as purveyors of some private or public service) seems also endemic in slum and public housing areas. Students of the interactions between caretakers and their lower class clients have suggested that there is a great deal of punitiveness and shaming commonly expressed by the caretakers in an effort to control and direct the activities of their clients *(19)*.

The defense of the client is generally one of avoidance, or sullenness and feigned stupidity, when contact cannot be avoided. As Caplovitz has shown so well, lower class people are subjected to considerable exploitation by the commercial services with which they deal, and exploitation for money, sexual favors, and sadistic impulses is not unknown on the part of public servants either *(20)*.

Finally, outsiders present in two ways the dangers of symbolic violence as well as of physical violence. Using the anonymity of geographical mobility, outsiders may come into slum areas to con and exploit for their own ends and, by virtue of the attitudes they maintain toward slum dwellers or public housing residents, they may demean and derogate them. Here we would have to include also the mass media which can and do behave in irresponsibly punitive ways toward people who live in lower class areas, a fact most dramatically illustrated in the customary treatment in the Pruitt-Igoe project in St. Louis. From the point of view of the residents, the unusual interest shown in their world by a research team can also fit into this pattern.

Finally, the lower class person's world contains many attractive alternatives to the pursuit of a stable life. He can fear for himself that he will be caught up in these attractive alternatives and thus damage his life chances, and he may fear even more that those whom he values, particularly in his family, will be seduced away from him. Thus, wives fear their husbands will be attracted to the life outside the family, husbands fear the same of their wives, and parents always fear that their children will somehow turn out badly. Again, the fact that you may yourself be involved in such seductive pursuits does not lessen the fear that these valued others will be won away while your back is turned. In short, both the push and the pull of the human world in which lower class people live can be seen as a source of danger.

Having looked at the sources of danger, let us look at the consequences which lower class people fear from these dangers. The physical consequences are fairly obvious in connection with the nonhuman threats and the threats of violence from others. They are real and they are ever present: One can become the victim of injury, incapacitation, illness, and death from both nonhuman and human sources. Even the physical consequences of the symbolic violence of hostility, shaming, and exploitation, to say nothing of seduction, can be great if they lead one to retaliate in a physical way and in turn be damaged. Similarly there are physical consequences to being caught up in alternatives such as participation in alcohol and drug subcultures.

There are three interrelated interpersonal consequences of living in a world characterized by these human and nonhuman sources of danger. The first relates to the need to form satisfying interpersonal relationships, the second to the need to exercise responsibility as a family member, and the third to the need to formulate an explanation for the unpleasant state of affairs in your world.

The consequences which endanger the need to maintain satisfying interpersonal relations flow primarily from the human sources of danger. That is, to the extent that the world seems made up of dangerous others, at a very basic level the choice of friends carries risks. There is always the possibility that a friend may turn out to be an enemy or that his friends will. The result is a generalized watchfulness and touchiness in interpersonal relationships. Because other individuals represent not only themselves but also their families, the matter is further complicated since interactions with, let us say, neighbors' children, can have repercussions on the relationship with the neighbor. Because there are human agents behind most of the nonhuman dangers, one's relationship with others—family members, neighbors, caretakers—are subject to potential disruptions because of those others' involvement in creating trash, throwing objects, causing fires, or carrying on within thin walls.

With respect to the exercise of responsibility, we find that parents feel they must bring their children safely through childhood in a world which poses both great physical and great moral dangers, and which seeks constantly to seduce them into a way of life which the parent wishes them to avoid. Thus, childrearing becomes an anxious and uncertain process. Two of the most common results are a pervasive repressiveness in child discipline and training and, when that seems to fail or is no longer possible, a fatalistic abdication of efforts to protect the children. From the child's point of view, because his parents are not able to protect him from many unpleasantnesses and even from himself, he loses faith in them and comes to regard them as persons of relatively little consequence.

The third area of effect on interpersonal relations has to do with the search for causes of the prevalence of threat and violence in their world. We have suggested that to lower class people the major causes stem from the nature of their own peers. Thus, a great deal of blaming others goes on and reinforces the process of isolation, suspiciousness, and touchiness about blame and shaming. Similarly, landlords and tenants tend to develop patterns of mutual recrimination and blaming, making it very difficult for them to cooperate with each other in doing something about either the human or nonhuman sources of difficulty.

Finally, the consequences for conceptions of the moral order of one's world, of one's self, and of others, are very great. Although lower class people may not adhere in action to many middle class values about neatness, cleanliness, order, and proper decorum, it is apparent that they are often aware of their deviance, wishing that their world could be a nicer place, physically and socially. The presence of nonhuman threats conveys in devastating terms a sense that they live in an immoral and uncontrolled world. The physical evidence of trash, poor plumbing and the stink that goes with it, rats and other vermin, deepens their feeling of being moral outcasts. Their physical world is telling them they are inferior and bad just as effectively perhaps as do their human interactions. Their inability to control the depredation of rats, hot steam pipes, bulky stoves, and poorly fused electrical circuits tells them that they are failures as autonomous individuals. The physical and social disorder of their world presents a constant temptation to give up or retaliate in kind. And when lower class people try to do something about some of these dangers, they are generally exposed in their interactions with caretakers and outsiders to further moral punitiveness by being told that their troubles are their own fault.

It would be too much to expect, indeed impossible, for a home to shelter from all of these dangers, but it is clear in the way lower class people talk about their home and the immediate neighborhood around them that it is their earnest wish that their housing provide a way for getting away from what they perceive to be a dangerous environment. As we have noted, at a physical level slum housing often presents dangers very much within the home, but an even greater goal and challenge for designers has to do with providing homes that allow for retreat and protection from outside dangers. The relevance of this for lower class housing aspiration will be outlined below but first let us examine briefly the major government response to the housing needs of the lower class, that is, the public housing program, and compare its merits and disadvantages to those of private housing.

The Adequacy of Public Housing for Meeting Lower Class Housing Needs

The public housing program has been almost the sole response of the government to the need for housing for the poor. Although newer programs such as the rent supplement program have been recommended, they have yet to be implemented in any significant way.[5] Over the years it has become increasingly obvious that public housing as a policy has little likelihood of satisfying the needs for low income housing. The projects have proved to be remarkably expensive and they have tended to generate so much public opposition, including opposition from lower class people, that it becomes increasingly obvious that large-scale public support would be difficult to muster for expanded public housing programs. To a considerable extent this probably stems from (a) the insistence of housing officials on coupling public housing with slum clearance, (b) the spillover to public housing programs of hostility toward urban renewal, and (c) the large-scale institutional image that public housing has come to have. But, increasingly, opposition to public housing reflects awareness that in very real ways it has often not met the needs of the lower class people it was supposed to assist.

There is, of course, a wide range of public housing projects in the nation, ranging from very large to very small projects, from high-rise complexes to low-rise housing. Similarly, there is a city-to-city range in the availability of alternative low income housing even when that housing is generally of inferior quality. For example, New York and Chicago maintain very long waiting lists for public housing and have vacancy rates that are for all practical purposes zero. A city like St. Louis, on the other hand, does not have long waiting lists and has vacancy rates that vary from a few percentages in some projects to over 25 percent in the Pruitt-Igoe project. The literature that discusses particular public housing projects and the data which are available from the Pruitt-Igoe research project (which involved intensive observation of one public housing project and cursory observation of public housing projects in New York City, Chicago, and San Francisco) suggest that while there are certain characteristic difficulties that arise in many public housing projects the range in degree of tenant satisfaction is very wide indeed.

At its worst, public housing is little better than an institutionalized slum with managements that could compete in terms of incompetence and hostility to tenants with any slum landlord. On the other hand, there are public housing projects which to all appearances are well managed, and in which the tenants seem quite satisfied (at least when they compare their present housing to the private housing that is available to them). On the other hand most public housing projects in large cities seem to have certain characteristic difficulties. The problems which our research has identified in the Pruitt-Igoe housing project in St. Louis seem to be but exaggerated and concentrated reflections of problems that are more general in public housing. Perhaps every major city in the country has at least one public housing project in which this concentration of problems is apparent. For example, Salisbury described Fort Greene Houses in Brooklyn in this way *(21)*:[6]

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[5] The observations that follow concerning public housing, and many of the more general observations above dealing with lower class communities, have been developed during the course of a 5-year study of one particular public housing project—the Pruitt-Igoe project—and explorations of other areas in connection with that research project. The study is supported by the National Institute of Mental Health: Grant No. MH-09189.

> I was warned that most visitors preferred to walk up three or four flights instead of taking the elevator. I quickly understood why they chose the steep, cold staircases rather than face the stench of stale urine that pervades the elevators. . . . I saw shoddy housing in Moscow. . . . I have seen Moscow elevators that don't work and Moscow plumbing that stinks. But until I visited Fort Greene I had never seen elevators used by children as public toilets. I never imagined I could find the equivalent of Moscow's newly built slums in the United States. . . . The same shoddy shiftlessness, the broken windows, the missing light bulbs, the plaster cracked from the walls, the cold, drafty corridors, the doors sagging on hinges, the acid smell of sweat and garbage, the ragged children, the plaintive women, the playgrounds that are seas of muddy clay, the bruised and battered trees, the ragged clumps of grass, the planned absence or art, beauty or taste, the gigantic masses of brick, of concrete, of asphalt, the inhuman genius with which our know-how has been perverted to create human cesspools worse than those of yesterday.

In general it would seem that public housing projects are unsatisfactory to their tenants mainly as neighborhoods and communities and not so much as homes. That is, one seldom encounters really serious criticisms of the apartments in public housing. Aside from accusations of sloppy maintenance, the criticisms seem to concentrate on the immediate neighborhood that the project community represents both in terms of management's inability to maintain the interiors of the buildings and the exterior project grounds in ways that are orderly, clean, and secure, and of the behavior of other tenants and outsiders that make the community seem a dangerous and unpleasant place. For example, in a survey of the Pruitt-Igoe housing project (which many tenants are ready to roundly condemn) we found that 62 percent of the tenants considered that their apartments met their needs much better than their previous dwelling place *(22)*. In contrast, in a sample from the slum neighborhood right next to the project community we found that only 32 percent of the private housing tenants felt that their apartments met their needs much better than the previous apartment in which they had lived *(23)*. Similarly, when tenants were asked whether on the whole they were satisfied or dissatisfied with their apartments, 78 percent of the Pruitt-Igoe tenants said that they were satisfied compared with only 55 percent of those living in the private housing slum nearby.

After all, public housing apartments do tend to be well constructed, to be much newer than private slum housing, and to have a number of conveniences that are not generally available. It should not be surprising that tenants find this aspect of public housing gratifying just as they might be gratified by moving into a new house in the suburbs. However, once one shifts the focus from questions about the apartment itself, a different picture emerges. When the focus is on attitudes toward whatever is outside the apartment, it becomes apparent that there are many sources of dissatisfaction expressed by public housing tenants that are perhaps less commonly expressed in the private slums. First of all there is a different standard applied to management. The scale of public housing projects means that if there is poor management it stands out in a much more obvious way than where there is poor management in private housing. In addition it seems very likely that both tenants and outsiders have higher standards for public management than they do for private slum management and therefore are more critical when the public managers fall short of these higher standards.

Perhaps one of the main effects of public housing is to make very apparent the community difficulties that are involved in slum living—particularly in high-rise projects where consciousness of other tenants tends to be exacerbated as they go up and down elevators and walk across grounds (and these are project grounds and not public streets as in the private slum). Tenants' awareness of a variety of difficulties that are typical problems of lower class communities tends to be heightened. Thus in our Pruitt-Igoe research we found a strong tendency for tenants to characterize as "a very big problem" in the project a wide range of difficulties. A few of these have to do with the design and maintenance of the project:

> There is too much broken glass and trash around outside.
> The elevators are dangerous.
> The elevators don't stop on every floor. So many people have to walk up or down to get to their apartments.
> There are mice and cockroaches in the building.
> People use elevators and halls to go to the bathroom.

However, by far the greatest number of troubles that people complain about have as much to do with the behavior of their fellow tenants as with the design and maintenance per se:

> Bottles and other dangerous things get thrown out of windows and hurt people.

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[6] For similar views expressed by working class people themselves see "The Limitations of Public Housing," *Jour. Amer. Inst. of Planners*, November 1963.

Children run wild and cause all kinds of damage.
People who don't live in the project come in and make a lot of trouble with fights, stealing, drinking, and the like.
A woman isn't safe in the halls, stairways, or elevators.
People don't keep the area around the incinerator clean.
People use the stairwells and laundry rooms for drinking and things like that.
Little children hear bad language all the time so they don't realize how bad that is.
The laundry rooms aren't safe; clothes get stolen and people get attacked.

Aside from those problems that are peculiar to a high-rise project, we found that in the private housing area there was also the awareness of the existence of many of these problems but the problems are not seen as quite so overwhelming. It is hard to know whether this difference between the housing area and the Pruitt-Igoe project is due to an absolute difference in the frequency of these kinds of behavior or whether it is due to a heightened awareness of problems that come from living in "a project." We are inclined to believe that the latter has at least some influence on the heightened problem awareness within the project although it certainly also seems reasonable to believe that the more public space there is in a housing complex, the more will be the opportunities for people to make troubles for each other, and the greater will be the maintenance difficulties. Of course some of the problems are specific to high-rises such as the problems of people or children using halls and elevators as bathrooms. On this item, for example, 81 percent of the project tenants said that this was a very big problem and 61 percent of the private housing tenants said it was no problem at all. Since the private housing area was primarily one of two- and four-flat buildings, this represents probably one extreme of lack of this problem. Buildings intermediate in size between the two-flat buildings and Pruitt-Igoe's 11-story buildings presumably would show a somewhat higher level of problem along this line.

As noted earlier there is considerable variation in the degree to which public housing projects were regarded by their tenants as problem communities, with projects like Pruitt-Igoe and Fort Greene and a similar project in Washington, D. C., perhaps representing the extreme. It is tempting, of course, to relate the degree to which a project is regarded as problematic to its structure, but then we must note that Fort Greene is not a high-rise project whereas Pruitt-Igoe is.

Variations in management competence certainly are involved here, but our impression is that the primary variable is the socioeconomic status of the tenants. It seems very likely that in those cities where demand for decent quality low income housing far exceeds the supply, housing authorities have managed to screen out the lowest status tenants and particularly families in which someone has gotten into trouble or is judged likely to get into trouble. In cities where there is not the same demand, public housing authorities have tended to house the most disadvantaged portions of the lower class population. This means that the success or failure of particular public housing projects really has very little to do with variables that are subject to control should the nation embark on a major public housing program designed to house a very high proportion of low income people who need decent housing. In other words, successful public housing projects are in a sense "false successes" because they are not really housing the people in greatest need. This is a phenomenon that has been observed by S. M. Miller in connection with manpower training programs. Miller refers to "creaming" as the process by which the best qualified of the target population are selected in order to assure a greater appearance of success. In that sense it may well be that Pruitt-Igoe and Fort Greene are better indicators of the likelihood of public housing proving a viable strategy for meeting the housing needs of the lower class than are some of the apparently more successful projects.

We have already suggested that the same factors operate in accounting for apparent variations in the desirability of private housing neighborhoods. That is, in discussing the differences between the situation of white and minority poor we have suggested that the white poor find the neighborhoods in which they live less threatening than the minority poor because the white poor are able to find housing in neighborhoods that are predominantly stable working class in character. In contrast, the minority poor tend to be concentrated in ghettos where a very large proportion of the population is forced into lower class adaptations which make difficulties both for themselves and those around them.

The Housing Aspirations of the Lower Class

The lower class people who live in the kinds of communities described above are perhaps even more sensitive to their disadvantages than are middle class social scientists and journalistic commentators. While they are less apt to point with horror and surprise at lower class housing conditions, they are even more sensitive to the pains and frustrations that these conditions cause.

When lower class people talk about the kind of housing they would like, the most basic desire that comes through might be called a desire for "defensible space." That is, they want a home which protects them from the various troubles and depredations that a lower class world can represent. To the private slum dweller who doesn't even have a functioning lock on his door, defensible space may mean most concretely a lock that is not easily broken or jimmied. To the lower class mother with several children, defensible space may mean a fenced yard in the back even in a rat-infested and deteriorated old house. Public housing is often valued because at least the apartment is well defended against the outside, but many of the criticisms of public housing have to do with the fact that the semipublic spaces—the corridors, hallways, laundry rooms—are poorly defended because so many persons have access to them or because they are isolated from the watchful eyes of fellow tenants.

When lower class people shift their discussion of aspirations to a more generous image of what might be possible, their aspirations turn out to be essentially the same as those of other "average Americans." Their ideal is a detached house with a lot around it in good condition. Lower class people sometimes think of suburban living as a little too fancy and formal, and too isolated, but just as do the great majority of stable working class people they value the idea of a house of one's own. Should that prove impossible the minimum conditions for a really desirable house might be specified as at least an apartment in a low-rise building with some outside space that is protected from public areas (whether that outside space be a balcony or a small fenced court).

There is no need for subtle analysis here. The housing aspirations of the lower class are imminently conventional. Because of their poverty lower class people are often willing to settle for, and even be quite satisfied with, housing that falls far below the average standard, but this should not confuse the observer into believing that their basic housing goals are any different from the rest of the population. Because of their weak economic position, lower class people would probably accept housing that would not be marketable to even modest income families—for example, row housing which most working class and middle class people prefer to avoid.

On the other hand, in general the housing aspirations of the lower class conflict rather sharply with conventional architectural solutions to the low income housing problem. Lower class people in general dislike high-rise housing. They are not particularly attracted to large complexes even in low-rise form. They prefer, for good reasons in terms of their own needs, housing that is conventionally arranged in terms of blocks. They have no great desire to identify with a larger community of persons in similarly desperate straits, while architects and planners seem continually attracted to visions of super blocks and designed communities which somehow maximize semipublic space while minimizing private space and the public space of streets and sidewalks. While architects and planners certainly need opportunities to experiment with new ways of designing neighborhoods, it is unfortunate that the main subjects of their experimentation should be lower class families who have little power to resist the design and great need for simple, ordinary, conventional amenities (*24*).

Implication for Policy

Several implications for policy flow from the above considerations of the situation of the urban poor generally, and of their housing situation in particular. Sociological research cannot prescribe in great detail the mechanisms by which policy objectives to meet the needs of the poor are to be carried out, although it is possible to suggest some aspects of these mechanisms. Rather, the main function of sociological research is to suggest certain *specifications* concerning what an adequate policy might encompass. These specifications then would require the attention of varieties of technicians—economists, real estate specialists, etc.—to develop them into a workable program. The emphasis below, therefore, will be on the general specifications of what an adequate housing policy to meet the needs of low income people might be.

(1) Housing problems of the poor are simply a reflection of problems of low income. Therefore the most direct and permanent way of solving these housing problems involves not housing programs but income-producing programs either in the form of employment programs or income-maintenance programs. As Gans has observed, "good housing does not cure poverty but . . . curing poverty will enable people to afford good housing. If poor people can obtain decent jobs to allow them to afford decent homes in decent neighborhoods, slums and slum living will be eliminated almost automatically. This ought to be the main goal of national urban policy."

Therefore, we can predict that the most effective policies in solving the housing problems of the poor will be those policies that are oriented toward solving the income problems that are definitive of poverty. All of the discussion of specific policy implication below will assume the existence of a vigorous and effective income policy. Indeed it seems very likely that in the absence of such a policy no housing program will be likely to make a significant dent in the housing problems of the poor whether these programs be the current public housing programs or the projected model cities and rent supplement programs. On the other hand, it is also true that effective income programs will not automatically solve the housing problems of the poor and the near-poor because the housing industry and governmental housing policies in this country have so far proved much less effective at providing housing for families with below-median incomes than they have for families with above-median incomes.

(2) Migrants as a transitional, marginal group in the city need housing that is manageable in terms of their transitional orientation. Migrants will not be particularly well served by programs that encourage ownership, or programs that require a strong interest in the maintenance and perfection of apartments or houses. As noted, the housing needs of migrants have traditionally been served by neighborhoods of fairly old housing

which are no longer attractive to more securely established working class people. Therefore government policies should encourage the maintenance of a good stock of low-rent older housing. This means that policies should encourage the maintenance and rehabilitation of older housing, should provide through insurance and subsidy reasonable mortgage financing for older neighborhoods, etc. The current mortgage situation in which it is easy to get long-term lower interest mortgages for new housing but very difficult to get equally good mortgages for old housing practically guarantees the deterioration of the older housing stock and the creation of destructive slum environments. To the extent that financing policies sustain older neighborhoods there will be a maximization of the mixing in of newer migrants with stable working class populations.

(3) The older housing stock will generally meet the needs of newer migrants, but there may be from time to time in some cities (because of the excessive deterioration of the older housing stock, or because of rapid growth in population) a need for new housing that meets the needs of new migrants. (Often the same kind of needs are present for newly married low income families.) Where such a shortage exists experiments might be considered which provide new housing forms for transient populations. For example, mobile homes and trailerlike prefabricated units offer considerable promise for meeting the needs of this kind of population. In fact the proportion of housing units that are mobile homes has been growing fairly rapidly for the past 10 to 15 years and apparently will continue to grow. As a minor part of the overall housing program, experiments in manufacture, site planning, and financing of these kinds of units might well be undertaken. Mobile homes, after all, have pioneered the development of compact furnished dwellings and an all-in-one price or rental. It is exactly this kind of dwelling unit that is most attractive to migrants during their early time in the city. Since mobile homes are in actual fact seldom moved more than the one time from the sales lot to the residential location, dwelling units could probably be developed which more closely approximate the conventional conception of what a home is like.

(4) Financing arrangements should be developed which encourage and enable landlords to keep up property which has heavy wear-and-tear. Above-average maintenance costs for marginal and transient population should be simply accepted as a fact and taken into account in initial financing, rehabilitation, new construction, and the like. Public housing projects in this country are apparently fast approaching a financial crisis brought about by the fact that maintenance costs were not realisticially anticipated when new projects were built. It is very likely that in the next few years some cognizance of this fact will have to be taken if public housing authorities are to remain financially stable and maintain their property.

(5) Shifting to the general problem of housing for the poor, it is important that housing policies be developed in such a way as to provide incentives for economically and racially integrated housing on at least a larger neighborhood basis. In terms of racial integration this requires vigorous enforcement of nondiscriminatory provisions for federally supported or assisted housing. In terms of economic integration a very complex problem is raised. This involves zoning, the nervousness of real estate agents and property managers, etc. However it should be possible to build into new housing policies incentives and subsidies which enable poor people to obtain good housing on the open market and which also encourage builders and managers to make such housing available to them. Some of these incentives are discussed below but there are undoubtedly others.

(6) A broad solution to the housing problems of the poor and the near-poor depends not only on solving the income problem as discussed in the first point but also on solving the problem of making housing available for families in the modest income category, that is, families with incomes just above the poverty level. We have suggested that it will not prove possible to provide housing on a large scale for families that have incomes below the current poverty lines. Therefore the first target of poverty programs should be the provision of a minimum income for families which is equal to at least one-half of the median family income for the nation. With a median family income of $7,500 this would mean a minimum income, to be insured by employment and income-maintenance programs, of around $3,750. That will at least bring poor families within striking distance of being able to afford decent housing *if* government programs encourage the provision of housing for persons with incomes somewhat above that.

As a target for a modest income housing program, therefore, government programs should be oriented to providing adequate housing at reasonable rent or purchase payments for people with incomes in the range of two-thirds to 80 percent of the national median family income, that is, in the range of $5,000 to $6,000. There is a great need for a housing program that insures the availability of housing for this group on a very large scale. Further, such a housing program should not downgrade the old stock of housing even though it should encourage the building of a great deal of new housing. Instead it should encourage the maintenance and transfer of old housing for families in this income range as well as the building of new housing.

Probably the most effective techniques for stimulating housing for this income range are macrotechniques of heavily insured and subsidized mortgages to builders, managers, and home purchasers, and the development of long-term loans of 30 to 40 years.

The target therefore should make it profitable for builders, rehabilitators, and managers to provide housing that can be sold or rented to families in this income bracket—that is, housing in which the rental or ownership payments are in the range of 20 to 25 percent of income for families with $5,000 to $6,000 incomes.

(7) Given such a program of housing for modest income families it would then be possible to solve the housing problem of the relatively poor by providing additional subsidies to builders, managers, and mortgagors to make these same kinds of housing units available at payments that persons with lower incomes can afford. Where builders and managers are participating in the modest income housing program they should be required to set aside a certain proportion of their units—say 15 percent to 25 percent—for those who cannot afford the ordinary rents or payments. These units would be made available to low income families and the government would finance the differential between the rent they can afford to pay and the ordinary rent or the ordinary payment for the home. Such an arrangement has the tremendous advantage of fostering the integration of the poor into the rest of the society and preventing the development of concentrated lower class communities.

The rent supplement program is one approach to this kind of goal. However, it obviously will be a highly vulnerable one in terms of its year-to-year financing out of general revenues. The same goal might be accomplished, as in some European countries, in a more meaningful way by an extra discount or greater subsidy on the loans and capital costs of the housing. For example, in a situation in which a builder is building 100 units he might be offered a low interest loan to cover 75 percent of those units and a zero interest loan on the remaining 25 percent under the condition that he rent or sell 25 percent of his units to persons whose incomes fall below one-half of the national median family income. In this way the payments made by the poor family could be low enough for them to be able to afford the apartment.

(8) Whatever system is developed to subsidize modest income housing and additionally subsidize housing for the poor, the qualification procedures for the families involved should be extremely simple. Certification of income could be simply accomplished by a form which indicates the amount of income on which tax was paid. There should be no income limits for continued tenancy so that families are not required to move out as their income rises (although, of course, there could be provisions for higher payments as income rises—but this procedure, too, should be simple and should not require annual or semiannual reviews of income since this proves to be one of the most irritating aspects of public housing from the point of view of the tenant).

(9) The goal of national policy should be to institutionalize the availability of housing for modest and low income families. This implies that the policy will encourage the institutions which currently provide housing for the population—private builders, private real estate owners, and the like—to provide decent housing for this population also. The most basic shortcoming of the public housing program is that because a different institution provides the housing—public housing authorities—the housing is inevitably labeled and stigmatized as somehow different and inferior to ordinary housing. The government should have no "chosen instrument" to execute its housing policies for modest and low income families. Rather there should be a maximum of flexibility in the kind of organization that provides these services, including the currently existing private organizations, encouragement of formation of nonprofit corporations of "Comsat-like" large commercial corporations, etc. No one kind of organization can sufficiently satisfy all the various needs of families in these income categories; if one kind of organization is set up to do so it will inevitably become stereotyped as providing inferior housing for "inferior people."

(10) It will not make sense for many families, particularly the very poorest, to seek to become homeowners. Any realistic housing program will continue to involve a large component of rental housing. However, to the maximum extent that is feasible, given the realities of income and family stability, government programs should encourage homeownership. This ownership can be in the form of the ordinary ownership of real property or in the form of condominiums and cooperatives, but the social-psychological meaning of being able to say that one in some sense "owns" his home is deeply imbedded in the way Americans think about their dwellings, and should be encouraged.

But it is important not to be sentimental about what ownership means. Since most Americans buy homes that are heavily mortgaged, ownership is often more an attitude than it is a property reality. This sense of building up some equity, no matter how little, and the sense of autonomy that comes from ownership, are important aspirations for even the poorest of families. Before a major program of encouraging ownership can be feasible, however, it will probably be necessary to work out some kind of mechanism that simplifies the buying and selling of property if some poor owners are not to suffer tremendously as the marginality of their position requires them to move about. Apparently there is now beginning to develop in the real estate market generally a system of equity insurance which allows people to sell their old house and move to a new one without having to conduct a financial balancing act. The government policies that encourage modest and low income homeownership should probably include some such feature.

(11) Finally, one of the corollaries of the implications discussed above is that slum clearance should assume a much more minor role in Federal housing policies than it has had to date. The policy perhaps should be that slums are cleared with Federal assistance only when they have reached the point that no one will live in them, that no one wants to rehabilitate the property, and that no one wants to buy the land at "ordinary" prices. Then slums should be cleared as public nuisances and the property bought at the realistic very low values that the properties actually have on the private market and not at the inflated prices that have typically been paid for slum clearance property. This situation, of course, varies from city to city but nationwide the situation in St. Louis is probably as characteristic as that of New York. In St. Louis today many slum properties have practically zero value in the sense that no private buyers are willing to purchase them, and many slum buildings that are structurally sound can be bought for as little as $1,000. Yet should these properties become part of a slum clearance area their price immediately increases. If housing policies are successful in creating a much larger supply of decent housing for low income and modest income families, these slum properties will be worth even less and they will very likely simply be abandoned by their present owners. When that happens it becomes more realistic to think in terms of "banking land" in the city rather than of purchasing income-producing properties in order to clear out the slums. The properties simply are not producing income. Perhaps slum clearance ought to proceed on a lot-by-lot basis with land clearance commissions being empowered to buy buildings at a realistic going market rate when a seller wants to offer them at that rate. The land should then be banked on the expectation that when poverty and slum problems are finally solved the land will again become attractive to builders. This kind of slum clearance could properly be regarded as an investment rather than simply an expenditure. The cleared land could be leased back to cities or to neighborhood corporations and organizations for use as pocket parks and parking lots until such time as its investment value is realizable.

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Chapter 16

Assimilation of Migrants Into Urban Centers

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Introduction

This paper was designed to focus on the set of current programs and policies influencing rural-to-urban migration. Our effort has been to—

(1) Appraise the effect of State and local programs on rural-to-urban migration; (2) identify the existing conflicts in major program elements; (3) assess the effectiveness of program elements in achieving stated and implied objectives; and (4) recommend desirable changes in programs and program directions to increase their effectiveness.

We understand rural-to-urban migration to be the flow of rural residents to urban areas. However, the actual process of migration—extending from the point in time when a rural resident elects to relocate to that point when he arrives in an urban area and begins to become an urban resident—is part of a much larger system. The larger system includes on the one hand the entire complex of interrelated factors—social, economic, political—that define the rural area and influence the decision to leave, and on the other hand, the complex of factors in the urban area that define the city and influence the in-migrant's adjustment to and future in the city.

Programs and Policies Affecting Rural-to-Urban Migration

There are numerous programs and policies on the Federal, State, and local level that have some effect on rural-to-urban migration. In this section we will focus primarily on identifying programs and policies that have a direct and substantial effect.

The influence of the vast majority of Federal, State, and local policies and programs on rural-to-urban migration seems to be incidental to their purpose and the "pushes" and "pulls" that they exert on the rural poor are byproducts of the pursuit of other goals. Nevertheless, in terms of the effect they have on rural-to-urban migration, programs and policies can be classified as:

Those that act to encourage rural-to-urban migration by creating conditions that tend to displace people from rural areas or that pull them toward urban areas.

Those that discourage migration, either by creating conditions that tend to hold people in rural areas or that discourage them from entering urban areas.

Those that provide, or that could provide, support and assistance in contributing to the success of rural-to-urban migration.

Programs and Policies That Encourage Rural-to-Urban Migration

Before a rural resident undertakes to relocate himself or his family to an urban area, he must first be aware of the existence of a problem, a lack, or a condition in the rural area that has a negative effect on him or that makes him feel uncomfortable. In other words, he must feel a need for a change in circumstances. Second, he must feel that leaving the rural area offers some hope of meeting this need. Third, he must feel that leaving the rural area is a choice that is both realistic and available to him. Fourth, he must feel that an urban area (rather than another rural area) will offer greater opportunities for the change in circumstances that is required or desired.

We, therefore, assume that the kinds of programs and policies that encourage migration are those that act to—

limit employment opportunities, displace workers, or further limit and depress living standards in the rural area.

discriminate against the poor or sub-groups of the poor.

provide information or experiences that increase the possibility of relocation being perceived as a viable alternative.

actually support relocation or require a willingness to relocate as a condition for receiving aid.

create the possibility of dissatisfaction where it did not exist before (e.g., by increasing educational level, or by increasing skills to a higher level than can be utilized locally).

Among the policies and programs that act in one or more of these ways there are only two that are specifically aimed at encouraging or supporting relocation from rural areas:

The first is the employment assistance program of the U.S. Department of the Interior, Bureau of Indian Affairs, a program that—

> . . . provides services to Indians who voluntarily apply and qualify for assistance to leave reservation environments by moving to nonreservation communities to obtain employment. Assistance and counseling includes selection of a relocation site based upon information about the chosen community's employment opportunities, climate, housing, community resources, cost of living, and any other advantages and potential problems.
>
> Financial assistance is provided in accordance with individual needs, and may include transportation, subsistence en route, transportation of household goods, subsistence at the destination point until applicant receives his first pay check, health services coverage, and emergency assistance.
>
> At the destination point, assistance is given in obtaining temporary housing, employment, permanent housing, and further counselling and assistance.

The second, the labor mobility demonstration projects, are sponsored by the Office of Manpower Policy Evaluation and Research (OMPER) and the Bureau of Employment Security (BES) of the U.S. Department of Labor.

The labor mobility demonstration projects were enabled by the 1963 amendments to the Manpower Development and Training Act (MDTA). These projects are still experimental and, in the language of the act, they are—

> . . . designed to assess or demonstrate the effectiveness in reducing unemployment of programs to increase the mobility of unemployed workers by providing assistance to meet their relocation expenses . . . (and) may provide such assistance . . . only to involuntarily unemployed individuals who cannot reasonably be expected to secure full-time employment in the community in which they reside, have bona fide offers of employment (other than temporary or seasonal unemployment), and are deemed qualified to perform the work for which they are being employed.

Under the rubric of being experimental programs, and as a result of interim findings, the labor mobility projects provide services in support of the migrant that include, but greatly exceed, the mere provision of financial assistance in meeting the costs of relocation. In the process, they have begun to develop some insights into what kinds of supports are necessary to insure a successful migration —defined for the purposes of this report to mean a migration where the relocatee makes an adjustment to urban life and earns an income adequate to maintain his family above the poverty level.

In the spring of 1967, we had the opportunity to observe six labor mobility projects in operation as part of a study for the Office of Manpower Policy Evaluation and Research of the U.S. Department of Labor. Four of the six projects deal with rural-to-urban migration and we offer examples drawn from those four projects to illustrate the effect of the program on rural-to-urban migration.

The four projects are located in North Carolina, Michigan, Arizona, and Virginia. The first three projects are all sponsored in the local areas by private contractors—a small statewide foundation, a branch of a State university, and a statewide Council of Protestant Churches—and funded by OMPER. The last project, in Virginia, is operated by the State Employment Service. Each mobility project is confined by regulation to recruiting only in those areas of a State that suffer persistent unemployment. The Federal guidelines also require that migrants are relocated, to the extent feasible, to urban areas within the State.

Although the four projects are aimed at different kinds of populations and utilize a variety of aids and program supports, each of them is concerned with the total process of rural-to-urban migration. That is, they recruit poor rural residents, aid in selecting destination, provide relocation assistance, and aid in the settlement of the migrant in the urban area.

The North Carolina mobility project

The North Carolina mobility project recruits its project population in 30 counties in the northeastern and southeastern agricultural regions of North Carolina and in 12 counties in the far western area of the State along the Tennessee border. All of these are traditional areas of persistent unemployment and at least 20 percent of the families living in them had incomes of less than $1,000 per year when the program began. Recently, however, the development of new industry in the western recruiting area has caused the project to focus primarily on the eastern tidewater areas for recruitment.

The project population is now almost entirely Negro and Indian, since the western area with its predominantly white population became a limited recruiting area. However, any rural resident of the recruitment area is eligible if he meets one or more of the following criteria:

Is a member of a farm family with a net income, during the previous year, of $1,200 or less.

Has been discharged from work for other cause than his own misconduct.

Has been unemployed for 6 weeks, regardless of cause.

The Negroes and nonreservation Indians who comprise the majority of the project population are most likely to be displaced agricultural workers whose families sharecropped in the past, before mechanization of some crops, the demise of small farms, and the tobacco acreage allotment system. Most now work as day laborers on farms in the area—seeking work as field laborers or tractor drivers on a day-to-day basis—and work, whenever possible, at odd jobs of the nonfarm type. Although some of the migrants in the program lived in nonfarm homes prior to relocation, many lived in houses located on farmland and either paid rent to the owner or pledged work in lieu of rent. In a number of cases, the migrant also received "furnish" from the farmer between seasons, in the form of food, clothing, limited credit, or small cash advances against future work.

The project staff recruits potential relocatees in their homes, in the fields, or through community institutions like bars, churches, etc. Existing social service agencies are also used as a referral source whenever possible, but the program has received limited cooperation from the Community Action Agencies (CAP's) in the area, and the project staff feels that the local welfare departments refer only their most difficult cases to the mobility project. Word-of-mouth reports, particularly from successful relocatees, are also an important source of recruits for the project.

In the recruitment areas few actual services are provided. The staff person talks with the potential migrant and his family two or three times after an initial indication of interest; there is a minimum of "prerelocation conditioning," consisting mainly of a pamphlet showing typical families, their homes, and their work before and after relocation. Discussion of the system of relocation assistance and appropriate destinations are also conducted and the migrant is helped to plan the family's relocation. The staff then sets a date for relocation and on that day the recruiter drives the migrant to the selected urban receiving area.

The project uses five urban receiving areas—all cities with tight labor markets and all located in the crescent-shaped Piedmont area. In each receiving area the project maintains a reception center that provides room and board on a temporary basis and aid in finding a job, finding suitable housing, and arranging for relocation of the family.

Since there is great demand for all workers at all skill levels in the receiving areas, migrants are usually placed in jobs within 3 to 5 days after arriving in the receiving area. Housing is, however, in serious short supply throughout the Piedmont area and the project has to devote considerable energy to finding suitable housing for the family. The project staff also provides a range of social services to the migrants for at least 2 months after relocation; among these services are orientation to the city and urban institutional procedures, attempts to develop social contacts for the relocated family, and aid in registering children in school and for medical clinics.

The project has demonstrated success in redirecting traditional migrant tracks to industrial areas within the State. Prior to intervention by the mobility project, rural residents in the southeast section of the State migrated south towards Charleston, S. C., or north—as did residents of the northeastern counties—toward Norfolk and Richmond, Va., Washington, D.C., Baltimore, and other northeastern cities. However, the significant factors in redirecting the traditional migrant tracks from the eastern agricultural counties seem to be knowledge of job availability at salary levels that are high ($1.60 per hour) compared to wages in the rural area ($5 per day for a tractor driver and less for a field laborer), and assistance in moving and initially settling in the urban area. Whether or not the new tracks from these counties to the Piedmont will become traditional must still be determined.

The Michigan mobility project

Northern Michigan University is the sponsor of the mobility project in the State and the target area for recruitment is the Upper Peninsula of Michigan—largely a rural nonfarm area that spans a distance of over 300 miles from east to west and 150 miles from north to south. Over the past 20 years unemployment has increased in this area because of a decline in the fisheries, and in timber work, and the depletion of iron and copper ore resources.

The population the project serves in Michigan are nonfarmworkers—many of the older workers displaced from the mines in the iron and copper ranges of the Upper Peninsula. The first wave of mine closings in the area took place around 1910 and a large emigration from the Upper Peninsula occurred at the time—largely moving to Minnesota, Wisconsin, and downstate Michigan. According to informants, most of the families who left at that time relocated permanently. Those who were left behind were either men who hoped the mines would reopen or those who lacked the economic, social, or personal resources to migrate. Prior to enrollment in the MDTA programs many of the potential migrants worked at seasonal jobs—lumbering during one season, tourism in another, and in between odd jobs or welfare.

The project population is almost entirely white and the potential relocatees who are recruited are MDTA trainees, or enrollees in other publicly supported preemployment programs in the Upper Peninsula of northern Michigan, who have little chance at local jobs. Eligibility for mobility assistance is assured through enrollment in an MDTA program. The present project draws from all of the MDTA programs in the Upper Peninsula and from a program for welfare recipients—men and women with dependent children—that is funded under title V of the Economic Opportunity Act and provides basic education and pre-vocational training.

The project, which is one of a complex of manpower and community service programs operated by the University, also provides relocation assistance to out-of-school neighborhood youth corps enrollees who cannot find suitable local employment; and it occasionally pays the job-interview expenses of enrollees in the University's Women's Job Corps program.

Prior to completion of MDTA or prevocational training, potential relocatees are interviewed and screened. Prerelocation counseling is given to all the trainees and to as many of their families as is possible on methods of transporting household and personal belongings, and information is provided on urban school and medical facilities, housing possibilities, sources of recreation, and existing civic and religious organizations. Job interviews are coordinated for the potential relocatee, preferably while he still is in training.

Financial assistance is given a potential relocatee to cover the necessary costs of going to a new community for a job interview. The costs of transporting the worker, his family, and his household effects, and the living costs and incidental expenses of the worker in the new area—before he receives his first job payments—are met by grants.

In the event of unanticipated financial difficulty in the demand area, the relocatee—in the first 3 months after relocation—may be helped by a small loan on which interest must be paid. During the first 6 months after relocation, the relocatee may also borrow up to $2,000, with interest, to cover the down payment in the purchase of a home.

The two principal receiving areas for the project's relocatees are southeast Michigan—Detroit and the surrounding suburbs—and south-central Wisconsin, the Milwaukee area. In each of the receiving areas a small staff works with and through the State Employment Security Commission to develop jobs. The staff also provides counseling and referral services where necessary, helps in finding suitable housing, provides job orientation and adjustment aid, and helps in adjusting to the urban environment.

Suitable housing is perhaps the most difficult problem in the receiving area. In spite of the services provided by the staff in the receiving areas, lower income white families have difficulty finding housing acceptable to them, particularly in the Detroit area. They are reluctant to move into integrated communities, they can't afford most of the all-white communities, and they refuse to move into predominantly Negro neighborhoods.

By relocating migrants to Wisconsin and southern Michigan, this project also reinforces the traditional migrant track for residents of the Upper Peninsula and makes no attempt to redirect tracks, although a few migrants have relocated to other midwestern States like Illinois and Ohio because of the availability of particular training-related jobs.

The Arizona mobility project

The mobility project in Arizona is sponsored by the Arizona Council of Churches and is one component of the Council's migrant opportunity program (MOP). Other MOP programs, such as work in community development, are funded under title II of the Economic Opportunity Act, and title III of the same act funds day care and adult education programs. The day care, adult education, and community development components of the MOP program operate in several of the more than 200 migrant labor camps that surround Phoenix.

The target population primarily consists of the Mexican American and Negro migratory agricultural workers who enter Arizona each year to work the crops and then move on to other States and other crops as part of one of the great streams of crop followers. The project recruits also from among former crop followers who have "settled out" of the migratory stream in rural Arizona.

Reports of the project staff indicate that mechanization of crops like cotton are making it increasingly difficult for the migratory worker to earn even a minimal living by following the crops—for instance, they reported that 10 years ago only 45 percent of the cotton crop was picked mechanically while today it is 99 percent mechanized. They pointed, too, to the imminent development of an improved mechanical lettuce picker which will affect the degree of work available for migratory farmworkers in another of the area's major crops.

Much of the recruitment for the program is accomplished through referrals from other MOP programs. Counselors then follow up with home visits to the family, discuss the program and the differences between urban and rural employment, etc., make a language assessment, and determine whether to refer the migrant for direct job development or to the basic education class the project operates in cooperation with the State Department of Vocational Education. The class provides English language instruction, basic and remedial education, and orientation to employment and the urban environment. While enrolled in the class, migrants receive standard MDTA stipends.

Job development is conducted by the project staff during the last weeks of the class and the counselors then help the migrant and his family to plan the actual relocation to the city and to find suitable living quarters in the receiving area. Some of the migrants are also helped to buy homes with loans made available from project funds for the down payments.

After relocation, counseling continues for several months and the counselors also monitor the migrant's adjustment to the job.

Phoenix is the primary receiving area for the project and it has a tight job market with substantial unemployment and underemployment. Between 1950 and 1960 the city's population increased from 106,818 to 439,170, an increase of over 400 percent for the decade. This situation makes both job development and the location of suitable housing difficult—and particularly so for families of low income and with few marketable job skills or urban work experience.

The project staff is fond of calling the program a "location" program rather than a "relocation" program since, as they point out, most of the migratory farmworkers in the target population have never been rooted in any one community before. Unlike some of the other mobility projects, the Arizona project can be viewed as terminating a portion of the migrant stream rather than redirecting a traditional migrant track.

The Virginia mobility project

Operating under the sponsorship of the State Employment Security Commission, the Virginia mobility project recruits unemployed workers both from the Appalachian region in the southwestern section of the State and from the Eastern Shore region.

The southwestern Appalachian region has been an economically depressed region for years. Automation and other changes in the coal mining industry have displaced many workers, particularly older workers, and the absence of any other industrial base in the area severely limits the availability of jobs for those entering the labor force. The adjoining counties in Kentucky are also suffering from the same set of problems, and unemployed workers from Kentucky are frequently in competition with the workers of southwest Virginia for the limited number of available jobs. The project staff also reported that some workers from the extreme southwestern corner of Virginia cross into the Knoxville, Tenn. area for work.

Although most of the work in the region is nonfarm, many of the families do some minimal farming—mostly corn or tobacco—in their attempt to patch together a subsistence level of living. Men from the area also leave frequently and migrate temporarily to Ohio, Michigan, Illinois, and other north-central States where they work for several months before returning home. In many of the cities they choose as destinations in this type of periodic migrations (e.g., Cincinnati, Chicago, Cleveland, Detroit, etc.) there are existing enclaves of earlier and permanent immigrants from Appalachia. According to the literature, the strong in-group feelings, their socially visible traits, nonindustrial work habits, nonurban living habits, and rigorous housing segregation have all held assimilation of the earlier migrant group to a minimum. The project staff also reported strong family or "clan" ties among this group and further stated that families in the area tended to live an isolated life.

The project's target population in the southwestern Virginia area was largely white.

In contrast, a substantial proportion of the relocatees from the Eastern Shore were Negroes with prior agricultural work experience. The Eastern Shore region has been traditionally more associated with Maryland's eastern shore than to tideland Virginia. However, a combination bridge-tunnel was constructed a few years ago across Chesapeake Bay between the southern tip of the Eastern Shore region and the major tideland cities of Norfolk and Newport News. Although use of the bridge-tunnel is expensive ($9 a round trip) the Eastern Shore is now accessible and the Norfolk-Newport News area has become a destination for migrants that is as geographically feasible as the traditional track from the Eastern Shore to Baltimore, Washington, and other cities to the north.

The Eastern Shore is still predominantly agricultural, however, although commercial fishing and some tourism contribute to the economic base of the area as well. The types of crops grown in the area (strawberries, etc.) require an extensive dependence on seasonal labor and local growers "import" large numbers of Negro, Mexican-American, and Puerto Rican migratory workers during harvest periods.

In the two recruitment areas the project identifies potential relocatees both through the files of the local State employment service offices and other State employment service programs and through direct recruitment in schools and other community institutions of the formal and informal kind. Most, but not all, of the relocatees recruited in the southwestern section of the State are graduates of MDTA programs—primarily in welding and other skilled trades. Influential growers and others in the Eastern Shore counties have resisted MDTA programs, however, so relocatees from that area rarely, if ever, have prior skill training. The State employment service office in Essex County is also oriented primarily to farm labor placement.

Once a potential relocatee has been identified, the project makes use of a unique arrangement with the Traveler's Aid Society to provide prerelocation services. Traveler's Aid, under contract with the Department of Labor, assigns a social caseworker to each of the two rural recruitment areas. The caseworkers then make contact with the potential relocatee and his family, conduct an interview or series of interviews, assess the family's needs and strengths and weaknesses, provide information on urban living and any counseling that is required, and help develop a relocation "plan" that includes the details of actually moving and arrangements to settle any outstanding debts or deal with similar problems that might be a hindrance to the family's mobility.

There is also a caseworker in the primary receiving area—the Norfolk and Newport News area—who is responsible for helping relocatees find adequate and suitable housing, aiding them in making an adjustment to the city, and for providing support and counseling on personal problems that might have an effect on the stability of the relocation.

The caseworker in the Norfolk-Newport News area works in close concert with the staff of the State Employment Service that is assigned to the project. The project staff assigned by the Employment Service undertakes the job development and job placement aspects of the project's work.

The major employer in the Norfolk-Newport News area is the Newport News Drydock and Shipbuilding Company. In fact, it is the largest single private employer in the State of Virginia and has a work force of about 17,000 employees. The shipyard is always in need of labor and offers job stability as well since work is continuous and the chances of a layoff are slight. Most of the MDTA graduates from the Appalachian section and a lesser number of relocatees from the Eastern Shore are placed on jobs at the shipyard where they receive more advanced skill training in the company's programs. For those relocatees who cannot pass the shipyard's security requirements—because of past arrests or poor records in the armed forces—and for those who are otherwise unsuited for employment in the shipyard, job development and placement is difficult. Nor is it usually possible to obtain jobs for women (as second wage earners in the family) since they must compete with the wives of servicemen who are stationed in the area.

A secondary receiving area in the State for relocatees from the Appalachian section is the Petersburg area where several large chemical plants are located. Employment stability is less certain in the chemical plants, however, since they are highly dependent on defense contracts.

Williamsburg is also a receiving area for workers from the Eastern Shore who are employed at the restoration site. Neither Petersburg nor Williamsburg have Traveler's Aid caseworkers, however, and the number of relocations to these areas is small. But by moving migrants to Petersburg and Williamsburg as well as to the Newport News-Norfolk area, the project has demonstrated the feasibility of redirecting the traditional migrant tracks that went from southwestern Virginia into midwestern cities and from the Eastern Shore up the coastline to urban centers in the northeastern States.

Other programs

Each of the four labor mobility demonstration projects that have been described has exercised some selectivity in recruiting potential relocatees. Many groups—such as second and third generation welfare recipients or families with large numbers of children—have in large part been excluded from the program because of the difficulties they present in terms of locating adequate housing, job placement, or in earning an income sufficient to support the family in an urban area. There is therefore little or no information available about what it might require to insure a stable and successful relocation for families of this type.

Nor has a body of data yet been accumulated on the long-term results of relocations assisted by the mobility projects since present Department of Labor guidelines require only a followup at the end of the migrant's first 2 months in the city.

In addition to the labor mobility demonstration projects which are concerned with providing support and assistance during the entire process of relocation from a rural to an urban area, there are a number of other programs and policies that encourage this type of migration, but in more limited ways. Among these are:

(1) The U.S. Department of Agriculture operates programs—under the policies of the Agricultural Stabilization and Conservation Service—such as acreage allotments, marketing quotas, soil bank, and price-support programs. In many cases the effect of these programs has been to limit the ability of farmers to expand their operations and to provide jobs for farm people.

(2) The food stamp program administered by the U.S. Department of Agriculture is designed to provide a choice of surplus commodities to people of low income, but *excludes the lowest income families*—those who can't afford even the minimal payment of $2 per person (a maximum of $12 per family)—in comparison to the surplus commodity distribution program that provides food without choice but also without charge. Under current regulations, a county must choose between the two programs. Reports, largely from civil rights groups, indicate that the choice of the Food Stamp Program in some rural counties, particularly in the deep South, is consciously used to "push" the poorest people or those with other "undesirable" characteristics out of the area.

(3) The recent amendments to the Federal Minimum Wage Law effective February 1, 1967, have had or will have a substantial effect on rural-to-urban migration. By extending the provisions of the Fair Labor Standards Act to include agricultural workers not formerly covered by the act, these amendments have, in fact, resulted in massive displacement of farmworkers. In areas like the Mississippi Delta, tenant farmers, sharecroppers, and day laborers are being put off the land because the farmowners do not have the resources to pay for hand labor now that it has lost its economic advantage over that performed by machine. It has been estimated that 50,000 people will be displaced in Mississippi alone during the first year.

An indication of the displacement effect of the extension of minimum wage coverage in the nonfarm sector is the findings of a survey conducted recently among 15,000 businessmen—mostly small businesses—by the National Federation of Independent Businesses, Inc. The survey found that 15 percent of those who decreased the number of workers employed in the first 3 months of 1967 did so because "such action was necessary due to the new minimum wage law." The groups laid off, for the most part, were high school age workers (a highly mobile group), marginal workers, and some handicapped people.

(4) The Manpower Development and Training Act programs of the Department of Labor are skill training programs aimed at providing basic skills in a wide variety of trades to unskilled workers or workers whose skills have become obsolescent. MDTA programs are directly related to rural-to-urban migration and worker mobility in two ways: First, MDTA programs require that applicants indicate a willingness to relocate if necessary in order to utilize their newly acquired skills; and second, MDTA programs in some States like Missouri, Arizona, and Michigan are closely related to labor mobility projects. In some cases, MDTA provides the training-related services for the mobility projects, while in others the labor mobility projects support the MDTA program by providing relocation assistance in the form of grants or loans and supportive services.

It is important to stress that MDTA programs do assume that many of the trainees who complete the program—and particularly those from rural areas—will have to relocate in order to use their skills. MDTA programs, though, do not provide funds for the cost of relocation or for preemployment interviews, although they do pay trainees an allowance based on the State standard for unemployment insurance (adjusted for the number of dependents) and they do provide transportation funds for commuting to the programs. Yet many trainees, as in southwestern Virginia and the Upper Peninsula of Michigan, finish the program and do not have the economic resources to relocate on their own, either because the training stipends are so small that their personal resources are exhausted during the training, or because their personal resources—including credit resources—were exhausted even before they entered the program. The latter situation is particularly common among trainees who have been unemployed for extensive periods prior to enrollment in MDTA training programs.

(5) The interarea clearance activity of the Bureau of Employment Security of the U.S. Department of Labor, operated through the State employment security commissions and their local offices, also encourages migration on the part of those who are provided clearance services. Briefly, clearance orders are issued by local offices who have specific job orders from employers that they cannot fill locally—they are sent to other employment security offices, first within the State, and then interstate. Applicants for job development and placement service who may be in the active file and who have the prerequisite skills or experience for the job are informed of the job opening and the location. If the jobseeker accepts the job and the employer accepts the applicant, the case has been successfully cleared.

However, responsibility for financing the trip for a preemployment interview, if one is required, and for financing relocation to the place where the job is may fall primarily on the unemployed worker.

In some cases, where the skill level is high or in extremely short supply, the employer may pay relocation costs. For those workers at low-skill levels—and those who have been unemployed for long periods in particular—the cost of relocation may be not only a hardship, it might actually prevent acceptance of the job offer.

Then too, since clearance orders are issued only in cases where suitable local labor cannot be found, it is likely that most of the jobs offered through the clearance mechanism are not the kinds of jobs suitable for most low income, unskilled people. And, therefore, while clearance activities may encourage migration, they are not likely to have a substantial impact on the rural poor unless they are linked with other programs of skill training and relocation assistance. Where this has been tried by mobility projects, such as in the rural-to-rural Missouri mobility project or the Michigan rural-to-urban project, the general results have been positive.

The major clearance activity related to farmworkers may inhibit rural-to-urban migration, however. The clearance program is the prime mechanism for obtaining seasonal work crews—largely migratory laborers—for farmwork in areas with heavy but short-term work needs, and after the harvest is completed in one area the work crews are frequently "cleared" to another. Thus the program supports the continuance of the migratory worker pattern.

(6) The Job Corps program administered by the Office of Economic Opportunity offers a residential training program for youth aged 16 to 22 who are considered disadvantaged. There are two types of Job Corps programs—urban and rural. Many rural youth are assigned to urban Job Corps centers, however, and urban youth to rural centers.

The Job Corps has recognized that for many of the corpsmen to return to their homes after completing training would be inadvisable or inappropriate—in some cases because the return to the same environment would be personally destructive, in other cases because they would not be able to obtain suitable employment in the home area, and in yet other cases because persistent local prejudices against the individual, his family, or his ethnic group would limit opportunity.

Many job corpsmen, therefore, relocate after completion of training, and funds can be provided to assist in relocation in addition to the funds accumulated by the corpsmen during training. However, there are no funds available for preemployment interviews, even when they are required by the employer and there are no funds available for effective followup on the corpsman after he leaves the program (to insure that he is in a decent environment, has decent housing, or such supportive services as he may need). Recent Job Corps contracts ask for assurance that the Job Corps Center will provide followup services, but with corpsmen scattered all over the nation and neither special funds nor special staff to do the followup, it is likely that followup will be more lip service than fact, unless some mechanism is established specifically for the purpose. And it should be pointed out that relocations to urban areas accomplished through Job Corps programs immediately affect only single men and women.

Programs and Policies That Support the Success of Rural-to-Urban Migration

In addition to programs that influence propensity to migrate, either positively or negatively, a number of Federal, State, and local programs and policies are more neutral in terms of their motivational effect on migration. To the extent that they are motivating forces they probably increase propensity. However, they serve a much more vital function vis-à-vis migration in increasing the probability of the rural-to-urban move being successful, once it is undertaken. Some of these programs might well be utilized in the rural areas while others must be provided in the urban receiving areas.

These programs and policies include the following:

(1) The adult basic education program, enabled under the Economic Opportunity Act of 1964, provides grants to State education agencies for the support of State programs to provide elementary

education to persons 18 years old and over, with an emphasis on fundamental skills (e.g., reading, writing, and basic mathematics). For many families, basic education for adult members will be a prerequisite to a successful relocation and satisfactory employment. In Arizona, for instance, the adult basic education program was an integral part of the prerelocation training course that was built into the procedures of the labor mobility project. In the Arizona project, the basic education component provides both fundamental education and remedial English language instruction for the Mexican-American migrants. In Michigan, the basic education course was linked to a title V work experience program for welfare recipients. Both experiences led to the impression that the basic education program is best when it is linked to other programs that promise an eventual economic payoff. This impression has been confirmed by the difficulty that basic literacy programs—such as those offered by many CAP agencies—have had in recruiting and holding enrollees. By tying the program to an economic payoff or allowance type of program, it may also be possible to attract those who need literacy training but can't fit it in reasonably with their work schedule.

(2) Vocational education programs for school age youth have the potential for providing a very basic level of skills to a highly mobile age group. However, there are a number of impediments to full realization of the program's potential. Course offerings are generally limited—even if only by economic considerations—and while the move towards regionalization of vocational education programs has expanded, and will continue to expand, the range of course offerings to youth in the areas served by the regional vocational schools, even these schools will have to face realistic limits of range. In other cases, the courses may be artificially limited and directed primarily at serving the interests of special pressure groups in the local areas. (The local school board system helps to make such situations possible.) In one southwestern State, for example, the vocational education courses in all areas outside of the three major cities in the State focus primarily on providing instruction in farm management and related agricultural subjects. In addition to the fact that these programs are inappropriate for the many students who must relocate to urban areas or become part of a surplus labor pool in the rural area, it was also admitted by a staff member of the State's Department of Education that the courses were aimed at meeting the needs of the children of farmowners in the area—those who would eventually manage the land—rather than the needs of those who will become merely farm laborers.

(3) Some particularly critical programs are those enabled by the Maternal and Child Health and Mental Retardation Planning Amendments of 1963. Although many States have not yet availed themselves of these programs—a number of the heavily rural States in particular—the supportive medical services available under the act address critical aspects of the problems of poverty. The program was designed to extend and improve maternal and child health services—especially in rural areas and economically distressed areas—by offering medical, educational, family planning, preventive, diagnostic, and treatment services, and hospitalization or other care directed towards achieving the general purpose of the act.

Moynihan has stated the relationship between poverty and family size clearly: "We may eventually startle the world with a statistical demonstration of the fact that the poor get children—or perhaps that people who get children get poor as well. What is emerging is the fact that not only is the American wage system not geared to providing any extra income for persons with extra family responsibilities, but further, the larger the family in the United States, the poorer it is. For both urban and rural families, median income rises until there are, as it were, three children—after which it drops off precipitously. This is how it is possible that a third of the children living in poor families have family heads that work all year round." (*8*)[1]

Moynihan further suggests that unemployment strikes differenially at large families below certain income levels (roughly under $3,000 per annum). In addition, there is high correlation between a low educational level and a large number of children. Our observations also suggest that large families are less likely to migrate and less likely to be successfu lin their adjustment to the urban area if they do migrate, since the problem of finding adequate housing increases with family size, as does the level of income required.

The family planning provisions of the Maternal and Child Health Act, therefore, assume major importance with regard to both the elimination of rural poverty and the success of rural-to-urban migration.

Since one of the major reasons that relocatees return from the cities to rural areas seems to be a health crisis in the family—particularly if the wife becomes seriously ill—diagnostic and treatment services provided either during the prelocation or the postrelocation stages should also contribute to the stability of the rural-to-urban move.

Funds for this program are made available to the States on a 50-50 Federal-State matching grant basis.

(4) Another array of medical supportive services is made available by the Medicaid program, generally administered in local areas by departments of public welfare. Under the provisions of this program, health and medical services are now available to a broad range of people who can meet quite liberal eligibility criteria. For instance, given an income (adjusted for the number of dependents in the family) within the criteria, an applicant may

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

even be a homeowner and hold up to a specified amount of insurance and other assets.

This program, covering hospital and surgical costs, physicians' fees, and medicinal costs, etc., radically extends the range of medical care available to the poor and has crucial implications for increasing the ability of the poor to take advantage of employment opportunities. A public welfare official in the Upper Peninsula of Michigan pointed out that many public assistance recipients who were enrolled in the title V training program entered with extreme health problems that had been previously unidentified. About 50 percent of all enrollees, according to this official, had some health problem and in many cases these problems—ranging from defective vision to alcoholism, from dietary deficiencies and obesity to mental health problems—were highly job related and could be expected to impair the ability of the individual to obtain and maintain stable employment. This official, and he is supported in these statements by the experience of the Job Corps, also pointed out that enrollees evidenced a high incidence of dental problems—frequently severe enough to cause systemtic infections that generated other somatic symptoms such as backaches or generally deteriorated resistance to other diseases. In turn, of course, this leads to excessive absenteeism and poor performance.

(5) The Wagner-Peyser Act of 1933 provides, among other things, for services and technical assistance to assist employers in improving the utilization of skills and potentialities of workers, particularly beginning workers; reducing excessive time off and absenteeism; improving work force stabilization; reducing problems of worker recruitment, selection, and assignment; and in developing manpower resources needed for technological advancement and economic expansion.

Any employer requesting assistance from the local office of the State Department of Labor's ESC is eligible. However, from our experience with employers in North Carolina, New York, Arizona, Virginia, and Michigan, the provisions of the act are little known or utilized by employers despite the fact that a number of employers questioned the wisdom of hiring relocatees, since they might be unstable. Several employers who expressed this fear already had extremely high turnover rates which they tended to discount when considering relocatees.

Employers, even many of the larger employers in these areas, did not have the in-house counseling and supportive personnel services that are becoming standard in more progressive national companies.

(6) The work experience program—enabled under title V of the Economic Opportunity Act, but administered by the Welfare Administration of the U.S. Department of Health, Education, and Welfare—provides financial assistance to States for establishment and operation of constructive work experience and training projects. In many instances public facilities such as hospitals, offices, and recreation areas can be used to provide work experience and appropriate training. The program is designed for "lower income families, including people who are present or potential recipients of public assistance, thereby helping them to find and hold gainful employment."

In the Upper Peninsula of Michigan the work experience program operated as a prevocational training program that included basic education and general acquaintance with the rudiments of several vocations. It was closely linked to and served a vestibule function for an MDTA program which in turn was linked to relocation assistance provided by the labor mobility program.

(7) Apprenticeship programs under the Bureau of Apprenticeship Training may meet the needs of one stratum of rural-to-urban relocatee but, because of eligibility requirements or policy interpretations, these programs exclude most persons who have not completed high school and have a background in mathematics or science.

(8) On-the-job-training (OJT) programs place workers with minimal skills on jobs where they earn while learning. Employers are reimbursed by the government for part of the cost of training. OJT programs figure prominently in the Arizona mobility project and represent the major mechanism utilized by that project to develop skilled workers.

Programs and Policies That Discourage Rural-to-Urban Migration

We began by formulating some assumptions about the kinds of programs that have a limiting effect on rural-to-urban migration. In general, we assume that any program or policy that results in improved conditions for the poor in rural areas—better housing, higher wages, greater benefits, or expanded employment opportunities—will have at least a short-term deterrent effect on propensity to migrate. Thus the promise of higher wages in North Carolina under minimum wage law amendments noticeably decreased willingness to relocate. There is evidence that the improvement does not even need to be permanent to divert attention from long-range planning or to increase the level of resistance to migration. In Michigan, for example, it was reported that people frequently dropped out of MDTA and title V work experience programs when jobs became available locally in seasonal industries. Similar occurrences were also noted in Arizona, particularly in the case of crops such as lettuce, where the pay scale during the picking season is higher than for most crops and higher even than training allowances.

(1) The prime example of a program consciously opposed to outmigration from the local rural area was the Community Action Agency representing a three-county area in eastern North Carolina. In

this case, the rural CAP is actively opposed to the migration of families from the area because the rural families will have difficulty functioning in an urban area. The current pool of surplus unemployed labor in the area—a pool that would, of course, be diminished by outmigration—was considered an asset in attracting industrial firms and businesses into the area.

In general, however, rural CAP's may act to decrease propensity to migrate—at least in short-range terms—by establishing programs that get people more involved in local organizations, that attempt to motivate people classified as undermotivated, that provide training and manpower development opportunities, that attempt to develop new job opportunities locally, and that provide ancillary and supportive services, such as Headstart and other day care programs for children.

(2) The farm labor placement programs of the State Employment Security Commissions undertake to place local farmworkers and to secure migratory farm laborers for seasonal work in the local community. They depend heavily, on the one hand, on local farmers who turn to them for workers and accept their referrals and, on the other hand, on an available supply of local farm labor and on the migrant stream. In order to recruit labor from the migrant stream, ESC farm labor representatives maintain extensive contacts with each other through the interarea clearance mechanism and sometimes travel to other States that have earlier growing seasons. In turn, farm labor representatives from several States are sometimes "wooed" or "entertained" by groups like a growers association in Florida whose members depend on migratory pickers to harvest the citrus crop.

There are some programs which limit mobility as a result of policy interpretation.

(3) The categorical assistance programs administered by State or local public welfare departments—particularly those aimed at dependent children and persons of childbearing age—may also act to inhibit migration. Each State now has the right to stipulate eligibility criteria and, given minimum adherence to Federal standards, the right to determine the dollar amounts of benefits. The States vary widely in the amount provided to recipients, with the urban industrialized States generally providing higher benefits. However, States, in establishing eligibility, are also permitted to establish minimum residency requirements. Over 40 States have such requirements, and newcomers or inmigrants to some States may have to live there for up to a year before becoming eligible for benefits that are paid largely from Federal funds—in categorical aid programs such as Aid for Dependent Children (AFDC) and Aid for Dependent Children due to Unemployment (ADCU).

However, a recent (June 1967) Federal court decision in Connecticut will, if it is upheld on appeal, eliminate State residency requirements in public assistance programs.

(4) Unemployment insurance programs provide financial benefits to unemployed workers through Federal and State cooperation. The States establish conditions of eligibility, the amount and duration of benefits, and the taxes to be imposed. All the States and the District of Columbia have laws to provide unemployment insurance. But coverage is far from universal and there are 15 million people in the United States at present not covered under the program's provisions. Nor are the programs in various States uniform. For example, 10 States pay benefits for dependents, the rest do not. In certain States, extended benefits are paid to unemployed persons who have exhausted their unemployment compensation. A few States pay benefits to persons who are temporarily disabled. All workers whose employers contribute to State unemployment insurance programs are eligible if they are involuntarily unemployed, registered for work, ready for work, and meet the earning requirements of the State law.

Although many of the poor are not employed in occupations covered by unemployment insurance, many are dependent on the benefits of this program during periods of unemployment. However, since the program is administered on a State level, and since benefits are not transferable from one State to another, migrant workers often fail to qualify for benefits by virtue of short periods of employment in different States.

The local ESC office also attempts to locate a job for the unemployed worker—and the lower his level of skill, the more likely it is that the placement will be both local and at the low end of the wage scale.

(5) The surplus food program, established to more effectively utilize agricultural surpluses and to contribute to indigent families, may actually be used to insure the availability of a local supply of surplus labor by utilizing the program to supplement other public assistance programs for seasonal farmworkers in the off seasons. If the theory is correct that anything that contributes to the well-being of the rural poor, no matter how minimally or how temporarily, makes migration from the area more difficult, then the surplus food program's provision of free goods may be expected to have an inhibiting effect on migration. Many thousands of rural poor people have nevertheless migrated, especially from the South. This food program thus appears to have had little effect in discouraging migration.

In addition, a number of government programs offer improvement of local conditions in rural areas and thus act indirectly to decrease propensity to migrate. They are as follows:

(6) The Area Redevelopment Act of 1961, now succeeded by the Economic Development Act of 1965—an expansion of the program under the U.S. Department of Commerce—has focused primarily

on the economic development of depressed rural areas, rather than on improving skills of rural people. Thus, the program has made substantial funds available for subsidized long-term loans to businessmen to build or expand factories and businesses in rural areas, and for building access roads, for developing water supplies, utilities, and sewage systems, and for building industrial parks and facilities for commercial recreation and tourism. A relatively modest program is provided for job retraining—original authorizations, according to Levitan, included $375 million over a 4-year period for loans to businessmen and the construction of public facilities, but only a maximum of $14.5 million per year for the retraining of workers and the payment of allowances to the unemployed workers while they undergo training courses. William L. Batt, Jr., Administrator of the Area Redevelopment Administration, reported in February 1965 that 548 projects approved by ARA would, when fully operational, provide over 115,000 jobs. He further stated that "More than three out of four persons now working on ARA-assisted projects were not working full time prior to their present jobs" (*1*).

Batt also reports that as part of this effort the U.S. Department of Agriculture helps the local communities in planning (apparently through the Technical Action Panels under the leadership of the Farmer's Home Administration), the Small Business Administration aids in making the loans to business, the Community Facilities Administration of the Department of Housing and Urban Development helps to provide loans and grants for facilities, and the Department of Health, Education, and Welfare participates with the Department of Labor in providing vocational training. Thus, to the extent that these agencies support and extend the work of ARA, they also act to inhibit rural-to-urban migration.

(7) The Farm Credit Administration of the U.S. Department of Agriculture and the Rural Electrification Administration make loans at relatively low interest rates to farm cooperatives and, in the case of rural electrification, to local community cooperatives or small businesses that can provide electric and telephone services. To the extent that these activities create new employment opportunities for the rural poor, or create conditions that are prerequisite to private and public economic development (e.g., better communications, access to utilities, etc.) they should also decrease the "push" on the potential rural to urban migrants.

(8) The Farmers' Home Administration of the U.S. Department of Agriculture is oriented toward providing aid to small, independent farm units. It is specifically aimed at improving "the lot, the prospects, and the opportunities of low income, rural families."

Since 1964, the Farmers' Home Administration has been strengthened by the opportunity loan program—enabled by the Economic Opportunity Act of 1964—that makes loans available to subsistence farmers and other poor farm families. The program provides loans of up to $3,500 (at 4⅛ percent interest with a repayment period of up to 15 years) to individuals who need a small amount of capital to improve their incomes—by buying land, livestock, machinery, or equipment—or to pay normal operating expenses for a variety of small enterprises.

The program also provides for loans without dollar limit (at 4⅛ percent interest and a 30-year repayment period) to "associations furnishing essential marketing, purchasing, or processing services to small farmers and other rural residents with limited incomes and resources."

In addition to the economic opportunity loan program, the Farmers' Home Administration will make operating loans (5 percent interest, 7 years to repay); farm ownership loans (5 percent interest, up to 40 years' repayment term); rural housing loans (5 percent interest, term of 33 years with various dollar limits); and in connection with the programs of the Economic Development Administration for depressed rural areas (cited above), Farmers' Home Administration makes long-term, low-interest loans for watershed development, development of recreation areas, water and waste disposal systems, and for rural renewal.

(9) Industrial development programs operated on the State level, usually by a department or agency created for that purpose, and generally working with and through local communities, attempt to attract industry and business to the State by offering tax abatements, land for plant development, an available supply of power, and a pool of available labor—in many rural areas low cost, nonunionized labor. Thus, the textile industry was attracted to the South from its former base in New England, and has become a substantial part of the economic base of States like North Carolina and some of the States in the TVA region.

(10) The local development corporation program of the Small Business Administration provides long-term, low-interest loans to local corporations formed for the purpose of improving economic conditions in the locality by attracting new business, by expanding existing operations, or by otherwise improving the economy and local manpower utilization.

Conflicts in Programs and Policies That Influence Rural-to-Urban Migration

In the last section we identified and described programs that may have an influence on rural-to-urban migration. In this section we will explore the various kinds of conflicts that exist between and within influential programs or the relevant sponsoring agencies, and that obstruct their purposes or prevent them from being fully effective in the rural-to-urban migration context.

The Organization for Social and Technical Innovation has identified several levels on which program or policy conflicts operate to create opposing fields of force around the rural-to-urban migrant:

(A) The most elementary level of conflict is that between the design, organization, or operational procedures of various programs and the clients the programs are meant to serve. In other words, conflicts of this type are between the ways in which programs are conceived or delivered and the needs of the target population. Common examples of this type of conflict are:

(1) The failure of programs to be sufficiently aggressive in disseminating information about the availability of aids offered by the programs, the eligibility requirements, and the procedures for securing aid or enrolling in the programs. Many such programs place responsibility for initiative on the client, although the client is frequently defined as "unmotivated" and may come from a population particularly incapable of assuming this responsibility.

Thus Cloward and Piven (*3*) suggest that for every person receiving public assistance in some major cities one or more other persons may be eligible for assistance—and in need of assistance—but deprived of it because of ignorance about the eligibility requirements, misinformation, or other factors unrelated to eligibility. Another program administered by local municipal or county welfare departments also commonly fails to aggressively inform or recruit enrollees who are in fact eligible and who could benefit substantially from the program. Under the provisions of the Medicaid program, nonwelfare recipients who meet the income requirements are eligible for assistance. The vast majority of those benefiting from the program are welfare recipients, however, although there are some indications that Medicaid will soon achieve much broader coverage.

Until recently the local offices of the State Employment Services also had limited outreach and depended primarily on the unemployed coming to them. The small communities program that sends mobile units to serve remote rural areas is an attempt to remedy this situation. However, it is still limited in scope as is the human resources development program of the Department of Labor which attempts aggressive outreach in urban areas as well.

(2) The failure of programs to take account of local conditions or the realities of poverty or of family life while planning or operating the programs. In Missouri, for instance, an unemployed man had traveled over 30 miles to register with the State Employment Service's office nearest his home. He was, however, asked to come back and another appointment was scheduled for several days later—requiring, of course, another trip.

In another rather common instance MDTA training programs are not scheduled with any particular regard for the time when major predictable periods of hiring will occur. Thus, MDTA programs may end at a time when hiring is slow. Nor are MDTA programs sensitive in their scheduling to times when the demand for seasonal labor will be high in particular local areas. In both Arizona and Michigan some MDTA trainees were reported to have dropped out in order to obtain higher paying—but very temporary—forms of seasonal work; and the programs at present have no way of adjusting to such contingencies.

Another example of the insensitivity of most programs to the realities of family life is the sole emphasis of most programs on the head-of-family rather than on the family unit as a whole. Yet the experience of the mobility project indicates that dissatisfaction on the part of the wife is a major cause of aborted relocations. In most cases where the impact of the programs will be to unsettle the family in any substantial way, the attitude of the wife, and often of the older children, is probably almost as important as the husband's.

(B) A second level of conflict is that within various programs; the internal conflicts between underlying assumptions or objectives and the effect or requirements of operation. In the course of describing some of the programs several examples of conflict on this level became evident. However, they bear repeating here.

(1) MDTA programs assume that workers may have to relocate in order to obtain training-related employment. Yet MDTA programs—except for those coordinated with mobility projects—don't provide relocation assistance despite the fact that the financial resources of trainees are likely to have been depleted seriously during the period of unemployment preceding enrollment in MDTA.

(2) The interarea clearance programs operated by State Employment Services also require that the worker relocate to another area within the State, at least, and in many cases, out-of-State. Yet the Employment Service generally leaves the problem of financing relocation—often including the family, household goods, and furniture—to the worker.

(3) A number of programs try to build "success" into the program by carefully screening out those with the least likelihood of succeeding or those whom the program staff believe will be less likely to succeed.

It is also fairly common to see selective recruitment in mobility projects where the project has developed an "ideal" migrant—in terms of age, family size, educational attainment, etc.—and then diligently seeks out and recruits families with as many of these characteristics as possible.

(C) A third level of conflict between various programs or policies occurs within individual agencies. There are two general types of such conflicts:

(1) Those that occur on a vertical scale—that is, between different hierarchical levels in the

agency—and characteristically stem from either different perceptions of the program's purposes or the differences in the fields of political force that influence the various levels within the agency. Some examples are:

(a) The contradiction between the general commitment of OEO to eliminate poverty nationally and the desire of a local CAP agency, such as the one in rural North Carolina noted above, to keep poor rural residents in the area even if it means missing opportunities available through assisted rural-to-urban migration.

There are several possible explanations for this conflict. First, CAP agencies tend to be dominated by local "power structures." That is, their design requires extensive representation from locally influential groups such as the "chief elected officials . . . the board of education . . . the public welfare agency, and from other major elements in the community, like business, labor, and religious groups" (*10*).

In rural areas, then, farm owners and local merchants are an important element in the CAP governing structure as are local officials who are likely to be less identified with the interests of owners and merchants who would benefit most from the availability of surplus labor or the attraction of industry to the area.

Second, funds for CAP programs are distributed on the basis of the incidence of poverty within the community. Therefore, there may also be a vested interest on the part of the CAP agency in keeping poor residents in the area. In some rural areas the rate of outmigration has been sufficiently high to disrupt such a base of funding.

(b) The contradiction between the commitment to effective utilization of manpower on a national level by the U.S. Department of Labor and the apparent identification of local employment service offices with the interests of local business or farm ownership groups that leads, in some rural areas in particular, to attempts to maintain a high level of surplus labor available in the community to meet local needs.

(2) Conflicts that develop on a horizontal scale within agencies such as—

(a) The conflict in some State employment service offices between farm labor representatives and mobility project staff that stems from the two different conceptions of how best to utilize local manpower and fulfill their functions. On the one hand, farm labor representatives have, over time, established close working relationships with local growers and conceive of their job as one in which they supply labor to meet the growers' needs. An available supply of surplus labor therefore benefits them. On the other hand, the mobility project staff conceives of the same surplus as underutilized labor that could be better utilized in another area.

(b) Another example of a horizontal conflict within the State employment service occurs in an area where seasonal work yields a relatively high annual income for those who are involved in it. In this area the introduction of MDTA programs has been resisted by the local community leaders, who see MDTA programs as potentially leading to migration from the area. They are supported in their opinions by the employment service staff in the area, who also resist the initiation of MDTA programs that are being recommended by ESC staff on the State level.

Conflicts within agencies or between the several programs of an agency seem to result from the different kinds of political organization that influence policies and the way in which programs are articulated at various operational levels, and from the various ways in which "success" or "doing a good job" is measured on the different levels of the agency.

(D) There are also conflicts that develop between agencies on the local level and between their programs. In the case cited earlier of the rural CAP program in North Carolina, we emphasized the possible conflict between the CAP agencies' concern for keeping unemployed people in the rural area and the Office of Economic Opportunity's national policies directed at the elimination of poverty. However, the CAP program was even more directly in conflict with the labor mobility project serving the area, since both programs were seeking to influence the same target population, but in opposing ways.

Conflicts between local offices of the State employment services and labor mobility projects in some States were also reported to us. In each case, the mobility project was sponsored by a private, nonprofit contractor and the mobility staff's approach to job development tended to be more aggressive than that of the ESC staff. The Employment Security Commission staff's chief complaints were that the mobility project's efforts duplicated their own extensively, and that it was confusing to employers to have to deal with two separate agencies, both operated under Department of Labor funding. On the other hand, the staffs of the mobility projects felt that ESC efforts were passive and limited, and that ESC procedures were both too slow and too confusing to be of value to the rural-to-urban migrants served by the mobility projects.

In the only State of those we observed where this conflict had been resolved, the mobility project staff also utilized direct aggressive methods of job development, but was more cognizant of the internal "politics" of the local ESC offices. The mobility staff, therefore, used the job development services of the ESC whenever possible and, in addition, asked employers who responded to direct solicitation by the Mobility Project to clear the job through ESC so that ESC staff could receive credit for the placement.

In those instances where this conflict was not resolved, the conflict seemed sharpest in receiving areas with tighter job markets—in other words, in situations where some competition for jobs might actually exist.

Conclusions and Recommendations

For several generations the "traditional" or "natural state" process of rural-to-urban migration has been immensely effective in moving the rural poor to cities. But the process is relatively and increasingly ineffective in alleviating the poverty of the migrants or in utilizing their manpower potential.

Yet, rural-to-urban migration will undoubtedly continue, due to further and predictable displacement of farmworkers and the inability to provide in rural areas enough nonfarm jobs at appropriate skill and income levels to meet the demand. As the 1967 Manpower Report of the President suggests, "The rate of economic development in or accessible to rural areas needed to absorb all of the oncoming rural labor force seems at the moment far beyond the realm of achievement" (*4*).

For those who will migrate, then, the critical programmatic problem is how to intervene most effectively in the "control" or "natural" process of rural-to-urban migration in order to increase the probability that the migration will, in fact, result in relief of poverty and new and improved opportunities for productive employment. When the natural state process is analyzed, a number of points emerge where an appropriate intervention can be influential in redirecting or modifying the process.

We will identify those points, suggest the types of modifications in existing programs that would increase their effectiveness as tools for intervening in the natural process of rural to urban migration, and explore some of the implications that derive from our recommendations.

Key Decision Points in Rural-to-Urban Migration

The rural resident who feels comfortable, realizes an adequate and relatively dependable annual income, or who has vested interests that are well served in the locality, is an unlikely candidate for migration. The first—and in a sequential sense, the earliest—prerequisite for migration from the rural area is a feeling of discomfort or uncertainty. Our observations suggest that this feeling is frequently associated with a change in circumstances or status, or with the opportunity to compare existing circumstances with potentially better circumstances.

The small tobacco farmer displaced by the acreage allotment program in North Carolina, the youth (particularly male) who leaves or graduates from high school, and the sharecropper in Missouri displaced by mechanization who was looking for year-round agricultural work, all had in common the fact that their circumstances or status had been altered radically. The North Carolina mobility project utilizes, with apparent good effect, a booklet that shows the improvement in circumstances that typical families were able to achieve as a result of migration.

If a solution to the problem cannot be found in the rural area, the individual is then ready to consider migration as an alternative. This seems to be a critical point where some motivation or readiness to be influenced programmatically exists. The failure to find a solution in the rural area for the problem felt by the individual might result from ignorance of available resources, improper use of such resources, or the inability of such resources to meet the individual's needs in the rural area. There is, therefore, need for a capability in the rural area that can disseminate information about available resources, help the rural poor to get to and properly use the resources, and develop different mixes of programs to meet the needs of various subgroups of the rural poor.

The next critical point for effective intervention occurs once it is clear that the rural area cannot meet the employment or income needs of a particular family, and relocation to an urban area is being considered as an alternative approach. It is at this point that choice of destination can be influenced.

The labor mobility projects have clearly demonstrated that it is possible to divert migrants from the traditional tracks to cities with tight labor markets. Exactly what it takes is not, however, clear. Labor mobility projects offer a combination of aids, including information about cities where jobs exist, financial assistance in relocating to a labor demand city and, if the individual agrees to relocate to one of the project's receiving cities, promises of a job, assistance in finding housing, in making other adjustments to urban life, and in solving any problems in the rural area that might limit freedom to migrate.

Although each of these factors probably influences a potential migrant's willingness to depart from the traditional track to some extent, access to information about cities other than the traditional migrant terminals, and in particular, cities where jobs exist, seems to be of fundamental importance. As we have seen in the natural process of rural-to-urban migration, the informal information networks are most likely to provide information only about traditional track cities. Therefore, alternate informational systems must be developed to counteract the traditional networks if more efficient utilization of manpower requires diverting traditional migrant tracks.

A second major factor in influencing choice of destination seems to be the guarantee of aid in job placement. In mobility projects, for example, the migrant must have a bona fide job offer before leaving the rural area, and in most cases, must actually begin work in the urban area before receiving the relocation grant. In order for the migrant to have a firm job offer prior to actual relocation, there must be either provision for funds to be utilized for travel and other expenses associated with preemployment interviews, or a close and tightly linked working relationship between the agency that provides the jobseeker in the rural area and the agency that performs the job development and placement functions in the urban area.

The third critical point for intervening programmatically in the natural state process occurs during the period between the time the individual decides to migrate and selects a destination, and the time when the actual move takes place. Many natural migrations are prematurely terminated during this period. This is the period when ties of family, ownership, contract, or membership seem to exert the strongest retarding influence. And this is also frequently the period when actual attempts are made to prevent the migration from occurring. Outstanding debts are a common cause of such attempts on the part of merchants or growers who have advanced money, furnish, or housing during the slack season. Yet, with the limited opportunities available in the rural area and the heavy reliance on part-time and seasonal employment, the worker's state of indebtedness generally can only deteriorate further in the rural area.

One appropriate form of intervention, then, would be a system either for insuring payment of debts after the migrant relocates or for providing grants or long-term, low-interest "debt consolidation" loans to migrants so that their past outstanding debts may be paid prior to relocation.

The next point where an intervention might be critical in supporting a nontraditional rural-to-urban migration is at the time of the actual move, when the migrant leaves the rural area, travels to and arrives in the city. Relocation assistance as provided by mobility projects helps in dealing with one of the problems often encountered at this point by providing funds for transportation for the migrant and his family and moving or storage costs for household goods. Mobility projects have also demonstrated the need for a reception mechanism in the urban area. In the natural process, the ghetto and friends or relatives act as a receiving mechanism; they provide a specific address as a first stop in the city, informal orientation to the requirements of urban living, immediately functional information and help in finding housing and making other adjustments, and, in many cases, they provide temporary housing by inviting relatives to share their homes.

Housing seems to be the greatest problem, even in cities with severe labor shortages. Not only is housing, in any condition and at almost any cost, scarce, but the supply of decent housing for low and moderate income families is even more limited. A substantial proportion of the housing available for families of this kind in most cities is substandard, situated in neighborhoods that have poor public and private facilities and services, frequently inconveniently located in terms of accessibility to transportation or place of employment, and often overpriced. In strange cities, families may need help even in finding poor housing.

The importance of increasing the supply of decent housing available to low income immigrants, as well as the housing of the urban poor in general, cannot be overemphasized, since it is a significant determinant of the success of migration in overcoming poverty and in realizing the full potential of the migrants' manpower. That is, poor housing in poor neighborhoods tends not only to perpetuate the condition of poverty, but also to be strongly work related, in that it affects health, use of leisure time, and education. Therefore, a program concerned on a national level with increasing the probability of "success" of rural-to-urban migration must address the problem of housing supply with as much vigor as the problem of diverting migrants to cities with high labor needs.

The recently arrived immigrant in a nontraditional city also may require assistance in learning the routes to work, adjusting to new types of work procedures in a new kind of work setting, in making social and organizational contacts, etc. Labor mobility projects have found that the process of helping the migrant to "settle in" to the city may require assistance ranging from arranging car pools with fellow workers to introducing the family to a church in the neighborhood, from arranging for health and dental care to help in developing budgets; from help in opening a bank account to interpreting and interceding in problems on the job.

Thus, in order to maximize the potential of rural-to-urban migration as a tool for improving the basic condition of the rural poor, a number of different kinds of interventions are required at various key points in the natural process of migration.

Recommendations for Modifying Programs

In most areas, even in some of the most isolated rural areas and some of the most depressed urban areas, there are now numerous agencies and programs that have relevance to the kinds of needs the rural poor have. Too often, even if there is an awareness of the full range of available services, there are too many agencies and too many programs located in too dispersed a pattern for disadvantaged people to cope with or negotiate all of them. They include, to mention a few, public educational institutions, welfare departments, rural extension services, State and local employment services, county health departments, and community action agencies. Furthermore, many of these programs are in conflict with each other.

Coordination of agencies and programs in this kind of situation is difficult, to say the least. Yet, failure to coordinate and the continued fragmentation of programs and delivery of services can only dilute the effectiveness of all the programs in terms of their ability to aid the rural poor.

There are some promising indications of increased cooperation and movement towards coordination on the Federal level. Joint agency funding of some programs is being experimented with in some cases, and both the National-State Manpower Development Plan and the requirements of the Economic Development Act that emphasize interagency cooperation on a regional scale are examples of the trend towards greater coordination within and between Federal agencies. The Comprehensive Area-State Manpower Planning System (CAMPS), although still too young to evaluate, is another attempt to develop coordinated efforts—in this case, comprehensive and integrated manpower programs within each State.

Also within the last few years, a number of agencies have begun experimenting with new ways of delivering services to the disadvantaged, and may therefore already have a relatively high degree of capability in this critical area. Community action agencies, for instance, have in many cases already developed new organizations on the grassroots level and may have broad contacts in local communities and channels for disseminating information that are not available to other agencies.

The small communities program of the Department of Labor is also an attempt to explore the feasibility of a new way of delivering services. The small communities program sends mobile units, staffed by State Employment Security Commission personnel, to remote areas where they recruit, counsel, and attempt to provide placement and job development services for people who would otherwise remain isolated.

Other agencies or programs that could be vital components of a coordinated approach to the rural poor have not evidenced the same kind of flexibility or commitment to trying to reach out to the poor. Educational institutions and welfare departments are prime examples of agencies that find it difficult to modify traditional practice. They are also subject to even more control on the local level of policy making than either CAP agencies or local ESC offices. The small communities program was originated on the Federal level, for example, as was the requirement that local or county CAP agencies must have at least one third of their board members drawn from the War on Poverty target areas.

There is, however, no efficient mechanism for accomplishing workable coordination among a broad spectrum of programs on the county and local level where the most potential for direct contact with the rural poor exists. We recommend the establishment of such a mechanism—a comprehensive rural area service program to serve as the coordinating agent for relevant Federal, State, and local programs in rural localities or counties. As we visualize such a mechanism, it would have the following characteristics:

Joint funding on the Federal level and joint policy planning.

Use of a model cities program type of financial incentive to induce agreement of agencies operating programs requiring local or State financial sharing of cost.

Coordination by the CAP agency on the local or county level and by OEO on the Federal level, even though it would mean a subcabinet-level agency coordinating efforts of cabinet-level agencies.

As conceived, the comprehensive rural areas service program would be charged with the coordination, on the local level, of all agency programs in the rural areas having to do with relief of poverty, welfare of families and individuals, manpower utilization, and the improvement of rural life. In each area, then, the cooperating agencies would include, as a minimum: the community action agency, the department of public welfare, the local offices of the Employment Security Commission, county and local departments of health, U.S. Department of Agriculture Extension Service, and representation from the school board.

Through coordination of the programs of these agencies, the comprehensive service program would provide the capability for "packaging" program aids and services uniquely geared to the needs of different groups of poor rural residents. In other words, the comprehensive service program would assume some responsibility for initiative, instead of continuing to assign to those least capable of negotiating a bureaucratic structure the responsibility for shopping around from agency to agency in order to get the particular mix of services required.

Thus, on the one hand, the comprehensive service program might develop a yearly plan for utilization of rural manpower in rural areas and a coordinated set of programs and services for allocating, training, and placing workers in both rural farm and rural nonfarm jobs, and, on the other hand, a program package designed to provide for those workers who will be migrating from the rural area the kinds of interventions required in the rural area to increase the effectiveness of migration as a tool for improved utilization and relief of poverty.

However, in order for the comprehensive rural areas service program to be maximally effective, the cooperating agencies will have not only to agree to more coordination than has been their habit, but also to assume some new roles, extend coverage, develop some new methodologies, and modify some of their operating procedures. In some cases, this will require legislative action in addition to the inducements offered by increased Federal contributions to program funding under the model cities type formula we are recommending, and in addition to strong policy directives from the Federal level.

In other words, it is our contention that many relevant programs are currently inadequate for the tasks that will have to be undertaken in rural areas in order to eliminate or substantially reduce poverty and achieve a higher order of manpower utilization.

Earlier we identified a number of the programs that influence the propensity of rural people to migrate to urban areas. In most cases, however, their effect on migration was seen to be incidental to their purpose. In order to be more consciously utilized to encourage and support rural-to-urban migration, many of the programs will have to be modified in terms of policies, methods, and operating procedures. In addition, a fully effective conscious utilization of existing programs as tools to aid migration will require sensitivity to timing and a focusing of programs at the several critical points of intervention we have identified. Specifically, the effectiveness of programs operated by agencies cooperating in a comprehensive rural areas service program might be enhanced by modifying them as follows:

(1) The local CAP agency would be responsible for overall coordination of the comprehensive service program. Since CAP agencies generally have more aggressive outreach methods than the other cooperating agencies and probably have, in addition, citizen advisory committees of some sort, the CAP structure may offer both the most appropriate mechanism for disseminating information about the kinds of services available and one of the prime mechanisms for actually recruiting and bringing into the program the isolated and hard-to-reach unemployed. CAP community workers and aids probably offer the most appropriate means of following up with individuals or families and helping them to continue to use the services available through the comprehensive service program effectively.

Of course, in order to fulfill this role vis-à-vis the comprehensive service program, rural CAP agencies would have to reexamine their orientation (to the extent that it exists) towards keeping all rural people in rural areas and come to grips with the fact that migration offers far greater opportunity to some of the rural poor than would be available to them in the rural area.

Finally, there are two legislative actions that could increase the effectiveness of rural CAP's in terms of their potential role in a comprehensive service program type of structure. First, if they are to encourage some groups among the rural poor to migrate without compromising the basis for their formula grant, funding for them to continue activities in the rural area will have to be assured. Second, an amendment that would broaden the uses to which opportunity loans may be put would add a program aid of use in helping potential migrants to consolidate and pay off past debts that might inhibit their ability to leave the rural area. Although the U.S. Department of Agriculture administers the present opportunity loan program, it was enabled by an amendment to the Economic Opportunity Act and an extension of uses in line with our recommendation might best be administered by the CAP agency.

(2) The standard operating procedures and statutory limits on the local department of public welfare might require extensive modification in order to enable a substantial contribution to the comprehensive service program. We suggest the following modifications on the Federal level:

(a) Elimination of residency requirements for public assistance. Residency requirements are presently set by the individual States and may constitute a barrier to interstate travel and relocation.

(b) Standardization of benefits on a national level on a federally administered sliding cost-of-living scale geared to the various States, and an increase in the level of benefits to an amount at or above the poverty income cutoff point. The effect of this type of modification would be to immediately lift welfare families out of poverty and to establish an income floor for recipients.

(c) Establishment of aid to dependent children for reasons of unemployment of the head of the household on a mandatory and national basis, instead of leaving it to the discretion of the State as at present. One immediate effect would be to keep family units together; another would be to increase the proportion of male recipients of public assistance in title V work experience programs and thereby increase the potential for lifting entire and intact family units out of poverty.

(d) Expansion of title V work experience programs and establishment of a linkage with the relocation assistance program under the labor mobility amendments to the Manpower Development and Training Act so that families receiving public assistance can relocate to areas where particular title V programs geared to their individual needs and vocational interest are located.

(3) The most extensive modifications will be required in the policies and operating procedures of U.S. Department of Labor and State Employment Security Commission programs.

(a) The relocation assistance and aid presently available under the amendments that enable the mobility projects should be extended to include grants and loans and followup aid to those who must relocate to obtain appropriate opportunities for training under title V, MDTA, or vocational education programs, as well as to those holding bona-fide job offers in labor demand areas.

(b) MDTA programs should grant some preference to those who have had prevocational training and work readiness experience in title V work experience programs. In return, MDTA should also be able to refer for title V prevocational training or to adult basic education those who need further preparation to make full use of MDTA training opportunities. MDTA allowances should be increased or linked to supplementary aid under public assistance programs such as ADCU in order to insure that families are not required to live in poverty or to dissipate all of their resources during the extensive training period.

Modifications having the effect of increasing the real income of families during training will also help to prevent dropouts from the program who leave to take seasonal work opportunities that will provide immediate income.

Scheduling of MDTA programs should also be made more flexible, and local administrators should be encouraged to schedule training programs to end during periods of the year traditionally associated with high levels of hiring in the trades that trainees are being prepared to enter.

Finally, MDTA programs need to reach and serve more rural people, both in rural areas and after relocation in urban areas. Also, to the extent that a higher order of skill and different kinds of skills will be required by those who will fill manpower needs in both farm and nonfarm jobs, MDTA programs need to be developed for rural residents.

(c) The small communities program needs to be expanded and made more effective. That is, it needs to reach more communities, more frequently, and for longer periods of time. But it also needs to increase the proportion of those contacted who are placed in jobs or in training programs. Currently, the mobile teams go primarily only into small communities that invite them to come. Yet, those most in need of their services are generally not in the types of status positions that would involve them in making the decision to invite or not invite the small communities mobile field teams to come. The program therefore needs to be more aggressive than it has been in entering communities and reaching those who most need counseling, job development, and placement assistance. By tying the small communities program into the comprehensive rural area service program, however, much of the previsit "missionary" work and organization might be done by the CAP field staff and the local CAP advisory bodies.

(d) The clearance activities operated through the local State employment services offices will also need to be modified. In rural areas they have traditionally been primarily geared to obtaining and clearing orders for large numbers of seasonal farm laborers. In order to provide support for rural-to-urban migration, however, clearance activities in rural areas need to be reoriented to establishing rural-urban communications on job and matching labor availability and linked to relocation assistance and aids for workers who receive job placement aid through interarea clearance but haven't the resources to relocate. The clearance mechanism might also be modified to take on the job of interarea referrals to training that would result from our earlier recommendations about new locations for training programs.

(e) Bureau of Labor Statistics reports on labor conditions in various cities will need to be modified in order to provide up-to-date data on labor needs in rural labor demand areas and in cities that are potentially desirable destinations for migrants. The reports will also need to be simplified to permit effective use by local agency staffs. Given these modifications, the Bureau of Labor Statistics reports could provide the information needed to serve as the basis for counseling migrants on destinations where plentiful employment opportunities exist.

(f) On the urban end of the process, job development procedures of the local State employment service offices will also require modification if they are to more effectively reach and serve disadvantaged populations.

The human resources development program and programs like the Youth Opportunity Centers are beginning aggressive recruitment practices to reach the unemployed in disadvantaged communities. However, job development procedures still seem primarily to consist of attempts to make placements to job orders placed by employers. In addition, new techniques might call for aggressive recruitment of employers and provision of technical assistance to employers in redefining the job descriptions and qualifications of jobs that cannot be filled presently, and in dealing with problems such as punctuality, attendance, and deviant work and personal habits among disadvantaged workers in new job situations.

(g) Coverage under unemployment insurance should be extended to include farm labor and other jobs that are not now eligible for benefits. Benefits should also be standardized from State to State, based on family size, increased to a level consistent with an intent to relieve poverty, and made transferable from State to State in order to permit geographic mobility.

(4) The Agricultural Extension Service of the U.S. Department of Agriculture could also perform an important function as one of the agencies involved in a comprehensive rural areas service program. The Extension Service has traditionally provided informal education and information to rural families on ways of more effectively utilizing and conserving the resources available in the area. The Extension Service might therefore be the appropriate agency—acting in cooperation with the rural CAP agency—to develop and carry out educational and training programs for rural premigrant families in subjects like homemaking, budgeting, and use of resources in urban areas. The prime target group in this case would be the wives of rural workers—a group critical to the success of the move, yet usually ignored by services and programs that influence rural-to-urban migration.

(5) State, county, and local public health agencies in rural areas also have an important function to perform both for those who will remain and work

in rural areas and for those who will migrate. They should be the primary agency for identifying and treating work-related health problems prior to relocation. Not only have title V work experience programs and the Job Corps discovered extensive untreated and previously unidentified health problems among the disadvantaged, but labor mobility projects have had a substantial number of job applicants rejected by companies in urban areas because of job-related health problems.

Most of the programmatic tools needed to provide health services and health education to rural residents are available, but are underutilized. The maternal and child health programs, for instance, have not been instituted in most rural areas and the Medicaid program is also little used. A change in the 50-50 State and Federal share funding formula that resulted in a larger Federal share might be an inducement to States that are not now participating. In addition, because of the scarcity of adequate medical facilities in rural areas, new delivery systems will be required to carry services to residents in isolated locations.

(6) Both the Economic Development Administration of the U.S. Department of Commerce and the Economic Research Service of the U.S. Department of Agriculture have important analytic and research functions to perform in a comprehensive rural areas service program. However, for their data to be most useful in providing the basis for planning the manpower needs of rural areas—for both farm and nonfarm jobs—and in projecting the magnitude of migration that will need to be encouraged, their methods of collecting, interpreting, and categorizing data will need to be coordinated with each other and with the much broader efforts of the Bureau of Labor Statistics.

(7) Public schools in rural areas have a particularly vital role to play in supporting the success of rural-to-urban migration. High school age youth and those who have just graduated from or left school represent a highly mobile group. Despite the fact that many—and in some cases, even a majority—of the graduating seniors in rural schools leave their home area, the public schools fail to provide any orientation to urban life. Vocational schools in rural areas, as we pointed out earlier, are primarily focusing on rural trades and neglect to include either courses in trades more common to urban areas or counseling and guidance in the requirements of city life.

They could provide an effective instrument for preparing youth for relocation and adjustment to urban living if they included preurban orientation courses and counseling as part of their regular curriculum, or even as an extracurricular or elective offering. Some measure of inducement might be offered by establishing a system of special earmarked grants for this purpose under title I or title III of the Elementary and Secondary Education Act.

Adult basic education courses that are specifically related both to skill training and urban adjustment in terms of content might be linked to—in addition to present links with MDTA and other Department of Labor programs—CAP programs, title V work experience, and USDA Extension Service programs. In order to reach the desperately poor, however, adult basic education programs should provide participants with an immediate economic payoff, either through MDTA or other training allowances wherever possible, or through a special nondeductible allowance system.

Finally, vocational education course offerings should be expanded and increased where relocation is required in order to obtain training-related employment or further training. Vocational education graduates should become immediately eligible for mobility assistance or counseling.

In urban areas, the efforts towards coordination seem to be further along, if not yet in effectiveness, at least in terms of willingness to experiment. CAP agencies are already working in concert with the local Department of Labor programs, and in some cases with local public welfare agencies. The CAP's, again because of their greater degree of relevance on the grassroots level of the community, may be the best agency to undertake coordination of the reception apparatus that is necessary on the urban end of the migration process. Through the local offices of the State employment service, the job development and placement activities and skill training programs, modified as we have suggested, can be carried out. Most CAP's have already developed programs in health and social services and referral procedures. There are two major requirements for effectiveness in the urban area that the CAP cannot now meet.

First, there is a need for an early identification system that is capable of identifying migrants as soon as they reach the city. This may mean merely coordinating for this special purpose the channels of information that currently exist, such as the clearance records in local State employment offices, new public assistance records, new school registrations, and the intake and service records of private agencies like the Traveler's Aid Society or local neighborhood organizations. On the other hand, it may require the establishment of a new apparatus to carry out this function.

Second, CAP's in urban areas have had little success to date in dealing with the problem of securing an adequate housing supply for low income families. In fact, in most major urban areas, government activities such as urban renewal have resulted in a net loss of units available for families of low income. Perhaps industries in these areas that require additional labor might be induced—given adequate financing or subsidization and insurance guarantees—to sponsor the development of more housing to meet the needs of the workers they hope to attract.

Implications

The program modifications we have recommended will tend, in most cases, to improve the impact of existing programs, even if implemented on a piecemeal basis. However, only if these programs are coordinated through a mechanism like a comprehensive rural areas service program will they be able to have maximum effect in relieving poverty or in utilizing manpower to the fullest possible extent. This conclusion is based, in part, on the ability of a coordinated program to better serve people who are not skilled in negotiating a range of agencies. But of even greater importance, this conclusion is based on our perception of the need for a mechanism that is concerned both with encouraging, supporting, and sustaining the relocation to urban areas by those who will not be able to escape from poverty or find suitable and rewarding employment in rural areas, and with developing manpower plans for rural areas that will meet the needs of those who elect to or are encouraged to remain in rural communities.

If rural-to-urban migration continues—and it seems sure that it will—and if rural areas cannot provide jobs for all rural residents who need jobs, then the debate as to whether the problem of rural poverty should most properly be addressed and ameliorated in rural areas or in urban areas is empty. No real choice exists. The problem of rural poverty must obviously be addressed in both rural and urban areas.

Yet, there is no way of determining how the manpower potential that currently exists in rural areas should be distributed between rural and urban areas for maximum use to the society and maximum benefit to the individuals and families involved. That is, there is a policy vacuum when it comes to deciding who should be encouraged to migrate and who should be encouraged to remain in rural areas. At present, the decision appears to be made almost haphazardly, on an individual-by-individual basis, and in the national tradition, with each individual having free choices to make. However, that is at best a surface impression. There is a wealth of evidence that suggests that, in fact, the existing programs and policies that influence rural-to-urban migration have a differential impact on various subgroups of the rural poor.

It is generally acknowledged, for instance, that despite efforts aimed at the support and encouragement of the small farmer—such as the farm opportunity loans—the ability of people on small farms to increase the size of their operations has been restricted by U.S. Department of Agriculture price-support, soil-bank, and acreage-allotment policies.

The 1967 Manpower Report of the President points to at least two other populations that are affected differentially by current programs or policies on the subnational level. Between 1950 and 1960, while the white rural population increased by 118,000, the rural Negro population declined by 600,000—a trend apparently related to "their displacement in agriculture by mechanization and the decline of the share tenant system," as well as to "the search for equality of social and economic opportunity" (*4*). That Negroes have been underrepresented in the rural nonfarm sector and overrepresented in farm employment is further borne out by the Manpower Report (*4*). It states:

> Farm and nonfarm rural enrollees [in MDTA programs] differed in a number of respects. In general, larger proportions of those with farm backgrounds were male and nonwhite; they also tended to be older and to have fewer years of schooling. A significant difference also existed between the persons enrolled in institutional training and those in OJT. One out of 5 of the institutional enrollees . . . was nonwhite, far above the OJT's 8 percent. Farm and nonfarm enrollees showed a similar difference: 35 percent of the farmworkers receiving institutional training and 24 percent of those in OJT were nonwhite, compared with 17 and 7 percent, respectively, of the nonfarm rural workers.

Negroes, it seems, are therefore more affected by policies that encourage displacement of farm labor than are whites.

The Manpower Report also points out that "Although many of the well educated leave rural areas to pursue the occupations of their choice, the opportunities remaining in stable or declining areas are most readily available to the families who own businesses or who have ample resources of land and capital" (*4*). Programs that lead to capital investment opportunities or to tax-saving opportunities in rural areas have a positive impact on such families. They are also the families in rural areas who are most likely to be in positions where they can influence local policies and the ways in which programs are articulated and interpreted.

The distinctions made by present programs and policies are, therefore, not rational. That is, the selectivity they exercise in determining who will be pushed out of rural areas and who will be encouraged to stay is not based on criteria like the need to alleviate poverty or to utilize manpower maximally. Nor can a policy designed to achieve these ends be based on the commonly expressed opinion that rural areas most need those who are most likely to migrate—the young, the well-educated or well-trained, and the most capable. Cities also need residents with these characteristics, and the evidence suggests that rural people with precisely these traits adjust best and most quickly to urban life. Some people with these characteristics may both make a larger contribution and gain greater personal benefits in rural areas, while for others, the city will offer better opportunities. There undoubtedly are other rural residents—older, less well educated or trained, and less likely to migrate—who should be encouraged to migrate because their potential can best be realized in an urban environment.

A more rational policy directed at conscious use of rural-to-urban migration as one of a set of tools for achieving effective manpower utilization patterns and relief of poverty would aim at developing selection criteria based on:

Accurate projections of rural and urban manpower needs, including, for any period, numbers and types of jobs, locations of jobs, types of skills required.

A categorization schema that would provide insights about the differential needs of various subgroups of the rural poor and about the types and combinations of programs required to train, move, and adjust different subgroups for different types of jobs in both rural and urban areas.

The comparative costs and benefits involved in following various routes to utilizing the manpower potential or alleviating poverty in the several subgroups.

Such a policy would not decrease the element of personal choice, since it is improbable that all the members of any particular subgroup could be beneficially absorbed either in exclusively rural or exclusively urban areas. At the same time, such a policy would provide an instrument for establishing priorities for programs, on a decentralized but systematic basis, to allocate funds and other resources, and to assess on a national basis the demand for funds, resources, and programs.

If it is successfully formulated and proves to be operationally feasible, such a policy could also provide the vital interface which needs to be established between "person oriented" training efforts (focused on the need of people, particularly the hard-core unemployed or disadvantaged, for jobs) and "job-oriented" training efforts (focused on the need for relieving shortages in various skill categories).

The comprehensive rural areas service program would then provide the operational mechanism for implementing the policy and analyze the needs of various subgroups of the rural poor, plan strategies of intervention, and develop packages of programs within those strategies to meet the needs of the rural poor for rewarding labor and a higher quality of life.

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Chapter 17

The North's Stake in Southern Rural Poverty

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Introduction

This paper examines the problem of southern rural poverty from the point of view of the metropolitan North. Thus, it attempts to construct a basic rationale for why the metropolitan North should be concerned with the condition of rural poverty in the South and to discuss the resulting implications for public policy. Its basic premise is that the problems of urban poverty in the North (construed in a broad sense to include the growing cities of the West) and those of southern rural poverty are inextricably intertwined; that the roots of much of the poverty in the metropolitan North are traceable to the rural South.

The paper begins with a discussion of the extent of southern rural poverty and its relation to the poverty of the metropolitan North. Then we investigate in some detail the crucial connecting link, the system of migration from the rural South to the metropolitan North. A discussion of southern education follows because it helps in understanding the persistence of poverty and is a necessary prelude to any consideration of alternative policies.

Poverty, Rural Poverty, and the South

Even the most casual investigation of U.S. poverty illustrates the extent to which poverty is disproportionately a condition of rural areas, of the Negro, and of the South. In part, the high incidence of poverty in the South may be attributed to its large Negro and rural populations, but a differential remains even after controlling for such factors. The extent to which U.S. poverty is concentrated in these groups is illustrated by data from the 1960 Census of Population on the number of households with incomes below the "poverty line" of $3,000 per year, one of the operational definitions of poverty used by the Council of Economic Advisors. This often-used, and even more frequently criticized, definition of poverty is imperfect, as is any single definition. Still, findings do not differ markedly from those based on other criteria. One might also be concerned about the use of 1960 census data in a discussion of poverty in 1967. However, persistence appears to be a characteristic of poverty and thus the general picture would be modified little by the use of more recent statistics.

Using the $3,000 criterion, 9.6 million U.S. families were in poverty in 1960. Of these nearly 10 million families, 4.5 million lived in the South. Almost two-thirds of these southern poor families were white (3.0 million versus 1.5 million Negro poor families) and the majority lived in rural areas (appendix, table 16). The statistics for poor unrelated individuals (those having incomes below $1,500 per year) are similar. For the entire United States there were over 6.3 million unrelated individuals below the $1,500 poverty level. Over 2.0 million of these resided in the South (appendix, table 16). Data are unavailable on the urban and rural residence of these unrelated individuals, but it is probable that a disproportionate number reside in rural areas. As was true of poor families, whites comprise about two-thirds of all southern unrelated individuals living in poverty.

These numbers take on national significance when expressed as percentages of either all poor families or all poor unrelated individuals (appendix, table 17). Thus, 46 percent of all U.S. poor families and 32 percent of all poor unrelated individuals live in the South. By comparison, the South contains only 30 percent of all families and 27 percent of all unrelated individuals (appendix, table 18). Similarly, 26 percent of all U.S. poor families live in the rural South even though only 12 percent of all families live there.

The great extent of poverty in the rural South can be shown by computing the incidence of poverty by race and residence. Table 1 illustrates both the overall extent of poverty and its differential intensity among groups. Thus, while the incidence of poverty among all residences of the rural South is very high, the incidence among rural Negroes is shockingly so: 78 percent of all southern rural Negro families have incomes below $3,000 per year as compared to 39 percent of southern whites. The differential between urban white and Negro families (i.e., those living in communities of more than 2,500 population) in the South is somewhat smaller, 18 versus 53 percent.

Statistics for the entire South tend to be somewhat misleading and understate the seriousness of the problems of southern rural poverty and their

TABLE 1.—*Incidence of poverty among families and unrelated individuals by residence and race: 1960* [1]

Income and residence	South			Rest of U. S.			Entire U. S.		
	White	Non-white	All	White	Non-white	All	White	Non-white	All
Families, less than $3,000:									
Urban	18	53	25	12	29	14	14	40	16
Rural farm	52	86	58	38	53	39	44	84	47
Rural nonfarm	35	75	41	20	44	21	26	70	29
All rural	39	78	46	25	45	25	30	74	33
All families	27	63	33	16	30	16	19	48	21
Unrelated individuals, less than $1,500	52	68	56	45	45	45	47	56	48

Source: U.S. Bureau of the Census. *U.S. Census of Population:* 1960. Vol. I, *Characteristics of the Population.* Part I, *United States Summary.* Washington, D.C.: U.S. Government Printing Office, 1964.

[1] Percent of families with incomes below $3,000 or of individuals with incomes below $1,500 in each classification.

implications for the North. The census region referred to as the South includes a very diverse group of States: for example, Florida and Mississippi, Maryland and Alabama. These States differ markedly in terms of their level of income, their proportion of Negroes, and other important characteristics. Although much of the data that will be used in the remainder of this paper is perforce based on census definitions, it is worthwhile wherever possible to make a more meaningful division of the Southern States. This is a problem that has caused considerable argument (not to mention a civil war), so some caution and exposition are clearly in order.

The U.S. Bureau of the Census divides the South longitudinally into the South Atlantic, East South Central, and West South Central divisions.[1] While the historic use of these divisions by the Census is an established fact, they fail to adequately represent the economic and social basis of the subregions of the South. In the first place, several States can be put aside as exceptions to the "southern pattern" of economic development. Maryland, Delaware, and the District of Columbia clearly fall into this category. Some commentators on the economies of the South have already made such exclusions by putting these areas into the Middle Atlantic division of the country. Continuing our pruning process, it seems reasonable to separate Florida from the rest of the South because of its peculiarities as a vacation and retirement center, the uniqueness of its agricultural activities, and its rapid rates of growth. With somewhat less confidence, Texas and Oklahoma can join this "heterogeneous" group. These States, while having definite southern characteristics, are heavily mixed with a western element (petroleum and open lands) that differentiates them from the rest of the region.[2]

Of the remaining States, a sharp division can be made between those of the "Core" or Deep South (South Carolina, Georgia, Alabama, Mississippi, Arkansas, and Louisiana and those of the Appalachian or border South (Virginia, West Virginia, North Carolina, Kentucky, and Tennessee).[3] The primary distinction drawn here is between States with high and low proportions of Negroes in their population. Table 2 shows this very clearly; 31.3 percent of the Core South and 16.6 percent of the Appalachian South are Negroes. In this respect, the group of excluded States are more similar to the Appalachian States.

Other important characteristics of the two regions are also listed in table 2. While the summary industrial statistics for the Core and Appalachian regions seem similar, the numbers mask the rapid changes that have been taking place. In particular, the Core South has dramatically reduced its dependence on agriculture since World War II. The demise of the southern cash crop, cotton, caused by both synthetic fibers and the more efficient cotton production of California and Texas, has left many whites and Negroes without a source of income. In the Appalachian States, agriculture was historically less important. Moreover, concentration in tobacco production, a crop which unlike cotton has not undergone a technical revolution, adds stability to this sector of the economy. As a result, manufacturing and other nonagricultural sources of employment

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[1] These divisions consist of the following States: *South Atlantic:* Maryland, Delaware, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida; *East South Central:* Kentucky, Tennessee, Alabama, and Mississippi; *West South Central:* Arkansas, Louisiana, Oklahoma, and Texas.

[2] In *Essays in Southern Economic Development*, at least three definitions of the South are used by various contributors. All of these exclude Maryland, Delaware, and the District of Columbia. Other States excluded by one definition or another are Oklahoma, Texas, and Florida (*7*). (Italic numbers in parentheses indicate references listed at the end of this paper.)

[3] The terminology used here was originated by Dunn (*4*). However, Dunn holds West Virginia out of the Appalachian region as a special case and follows a similar policy for Louisiana with respect to the Core South.

TABLE 2.—*Selected characteristics of the southern subregions, 1960*

Subregion	Population thousands	Percent Negro	Percent employment in agriculture	Percent employment in manufacturing	1950–60 net migration thousands
Appalachia	16,989	16.6	13.2	31.9	−1,434.3
Core	16,813	31.3	11.8	23.7	−1,719.3
Heterogeneous	21,170	15.2	7.1	16.3	+1,737.9
South	54,973	20.6	9.6	21.4	−1,415.7
South Atlantic	25,972	22.5	8.0	23.6	+634.8
East South Central	12,050	22.4	13.2	23.8	−1,463.8
West South Central	16,951	16.3	9.6	16.1	−586.8

Source: U.S. Bureau of the Census. *U.S. Census of Population: 1960.* Vol. I. *Characteristics of the Population.* Part I. *United States Summary.* 1964.

have come closer to offsetting agricultural declines in Appalachia than they have in the Core South.[4] These changes especially affect the Negro population of the Core South who, even more than Northern Negroes, are generally the last hired. Thus, while the demise of agriculture provides substantial incentives to migration from the Core South and affects primarily the Negro population, in the Appalachian region changes in agriculture have not been so crucial. Here declines in nonagricultural industries such as coal in West Virginia and textiles in North Carolina have been relatively more significant.

Having made this division of the South, it is useful to compare the subregions here defined to those used by the Census. As shown in table 3, the Census divisions particularly fail to distinguish the concentration of poverty within the South. The concentration of Negro rural poverty in the Core South and white rural poverty in the Appalachian South are conditions that lead to important consequences for the metropolitan North.

Southern Poverty and the Metropolitan North

The statistics on southern poverty presented above are ample reason for concern. Certainly a society as wealthy as the United States in 1967 can afford to guarantee the well-being of the disadvantaged, wherever they may live. Humanitarian grounds alone would appear to be more than adequate justification for programs designed to eradicate southern, and particularly southern rural, poverty. However, this general rationale for action is not the subject of this paper. Rather, we will argue that it is in the narrow self-interest of the wealthy metropolitan North to be concerned about

TABLE 3.—*Incidence of poverty among families and unrelated individuals by southern subregion and race: 1960* [1]

Income and residence	Core			Appalachia			Heterogeneous		
	White	Non-white	All	White	Non-white	All	White	Non-white	All
Families, less than $3,000:									
Total	29	72	40	30	63	35	23	49	26
Urban	18	66	31	18	54	24	16	44	19
Rural nonfarm	36	81	47	36	69	40	31	68	36
Rural farm	55	89	65	55	84	59	45	77	47
Unrelated individuals, less than $1,500:									
Total	57	85	63	55	69	58	49	59	51
Urban	52	74	59	49	67	53	36	57	39
Rural nonfarm	64	83	70	62	72	64	59	70	61
Rural farm	74	91	81	75	87	78	62	78	64

Source: U.S. Bureau of Census. *U.S. Census of Population: 1960. General Social and Economic Characteristics, Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia.* 1961. table 65.

[1] Percent of families with incomes below $3,000 or of individuals with incomes below $1,500 in each classification.

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[4] In analyzing employment changes due to the industrial mix of the two sectors, Dunn finds that fast growth sectors made up almost 50 percent of the Appalachian agricultural losses between 1939 and 1958, but only about 28 percent of the Core South agricultural losses (*4, p. 17*). Note, these figures do not take into account any of the "competition effect" which also favors the Appalachian South.

the condition of southern poverty and its persistent causes.

These causes are many and complex and a complete exposition would extend beyond what is of relevance here. However, it is difficult to avoid the conclusion that the roots of southern poverty are deeply embedded in racial discrimination and a longstanding and pervasive underinvestment in both human and physical capital. To the extent that the metropolitan North is closely intertwined with the rural South through the forces of migration, these factors become pressing problems for that region too. To the extent that the southern migrant, ill-prepared for urban life, becomes a problem of the metropolitan North, the improvement of the rural South is in the North's self-interest. Moreover, if southern poverty leads to underinvestment in human capital, the consequences may well be felt to a greater extent in the more industrialized North than in the rural South.

It is our contention that the migration streams originating in the rural South form the crucial link in a system of poverty; a system nurtured by the inability or unwillingness of rural communities to adequately prepare their children for the complexities of modern life; a system brought to fruition in the metropolitan area too crowded and too shortsighted to rectify these mistakes. While much of this argument appears to be obvious for the southern Negro migrant, it is important to realize that a similar causal chain explains substantial amounts of metropolitan white poverty. The Appalachian South plays a role for white urban poverty (especially in the North Central region) similar to that which the Core South plays vis-à-vis the metropolitan ghetto. While the southern white does not come up against the same obstacles of discrimination that meet the southern Negro, he does suffer from similar, if not as extreme, educational and vocational handicaps. Clearly the magnitudes of both movements, Negro and white, index the extent of the northern metropolitan areas' self-interest in the rural South. The next section will analyze the linkage of the rural South to the rest of the nation through migration. Then we will proceed to a discussion of the implications of these streams for the metropolitan North, West, and South.

Southern Migration

High levels of southern outmigration result largely from historical experience as an underdeveloped, and even colonial, region with a "population problem." Like many areas of the world, the South has amply explored the possible variations of subsistence agriculture. It does not require a great deal of sophistication to realize the shortcomings of such an economic system. Nor do trends since World War II indicate any eagerness to continue the peculiar agriculture of the South. This has not, however, meant the demise of the rural southern population which has shown only small declines. One reason has been the growing rural manufacturing sector. Another has been the rural South's traditionally high birth rates.

The continued existence of a hard-pressed southern rural population implies serious problems for metropolitan areas, the natural destination of rural America's surplus population. Indeed the South's most consistent export has been its people. As Ginzberg and Bray put it, "One of the major products of the South is babies. One of its major exports to other parts of the country is young adults" *(6, p. 189)*. Thus, starting with the decade **1910–20** and the opportunities opened up by World War I, the South has never failed to run a net migration deficit of 1 million, reaching a high of 2¼ million for **1940–50** *(10, p. 251)*. These migration streams have become increasingly Negro as most new opportunities in the rural and urban South tend to be for whites only. The directions of these streams become significant in light of the magnitude and persistency of the net numbers. Where have the people gone?

Migration Streams

In discussing migration, it is important to distinguish between the characteristics of the migrant, his place of origin, and his place of destination. The major data sources used here are especially poor in this respect. The **1960** census provides a lifetime migration series that gives State of birth and State of **1960** residence by race. The same series gives division of birth for the residents of the largest Standard Metropolitan Statistical Areas (SMSA's) in the country (greater than **250,000** in population). The census also contains 5-year migration estimates by State of residence in **1955** and place of residence in **1960**. These tabulations include several other characteristics of migrant as of **1960**. The series is based on a 25-percent sample which is notorious for nonreporting. Finally, a special set of reports by the Department of Agriculture in cooperation with the Department of Commerce provide estimates of net migration in regions, divisions, States, and SMSA's by age, sex, and race for the **1950–60** period. These three basic sources are in *(2, 19, 20)*.

The implications of the lifetime migration figures must be carefully drawn, since (perhaps understandably) the census does not obtain information on the rural-urban-metropolitan level at place of origin. Moreover, problems emerge from the definition of the divisions of the country. As discussed above, the longitudinal division of the South fails to isolate meaningful subregions; therefore the Core-Appalachian distinction should be kept in mind as an overlay on the census regions. Nevertheless, the peculiarities of the data have a saving grace in that population flows for Negroes run on north-south lines. These are clearly discernible with the current division of the South once it is understood that the majority of Negro migrants were born in the Core South.

With respect to points of destination, much of the following discussion is based on a disaggregation of the divisional inmigration into large metropolitan areas (SMSA's greater than a million), medium sized SMSA's (250,000 to 1 million), and the remainder of the division. These categories are dictated as much by the availability of data as by analytical justifications.

In returning to the question: Where have they gone?, it is perhaps natural to find that the answer varies sharply with the race of the migrant. Thus, the typical rural Negro lifetime migrant tends to move to large urban areas (greater than a million in population) outside of the South. The white movement is more diffused and has a marked orientation toward medium-sized northern cities and the metropolitan areas of the South itself. While southern-born whites and Negroes each sent about 2½ million (2.61 and 2.47 million, respectively) individuals to cities larger than a million outside of the South, only .42 million Negroes went to nonsouthern cities of between 250,000 and a million as compared to 1.42 million whites. Moreover, all SMSA's greater than 250,000 account for only 60 percent of the whites leaving the South as against 89 percent of the Negroes. With respect to movements within the South, only .86 million Negroes left their State of birth to move to southern SMSA's greater than 250,000 as compared to 2.86 million southern whites.

The 5-year migration series (1955–60) suggests no recent alteration of the basic pattern. Thus, 25 percent of the white outmigrants from the South moved to rural areas in the North and West, as compared to 8 percent of the Negro outmigrants. Within the South, southern cities account for 72 percent of all southern whites moving to urban areas, but only 55 percent of all southern Negroes. Moreover, there is evidence that Negroes moving North move in stages: first to a southern city, then to a northern one.[5] If this is so, the differences are even larger than indicated here. It is also important to note that these figures include considerable inter-urban migration. If the rural-urban stream could be isolated, it is likely that the pattern would become even sharper, with rural Negroes much less reluctant to move North than their white neighbors.

Support of these conclusions and some idea of the impact of outmigration on the rural South can be gained from an examination of the 1950–60 net migration figures. Table 4 gives net migration from southern counties by race and extent of urbanization. The pattern of internal migration can easily be inferred from these figures. Thus, Negroes are quicker than whites to leave all areas and slower to move to the highly urban counties within the South. The magnitudes of southern rural outmigration becomes clear: *almost 2 million southerners (net) left counties having less than 30 percent urban population.* At the same time highly urbanized areas were attracting immigrants from both the white South and North.

The system of southern migration is even more specific than indicated in the above comments. This is clearly brought out by an analysis of the fraction of lifetime outmigrants (individuals born in the division now living elsewhere) from the three southern divisions now living in various parts of the country (appendix, tables 19, 20, 21). Fifty-eight percent of Negroes born in the South Atlantic division and now living elsewhere, live in the four northeastern SMSA's greater than a million, (Buffalo, New York, Philadelphia, and Pittsburgh). Similarly, about 40 percent of the Negro lifetime migrants from the East South Central division have moved to the five East North Central SMSA's greater than a million, (Chicago, Detroit, Cincinnati, Cleveland, and Milwaukee). Finally, about 36 percent of the same group from the West South Central division live in the four Pacific SMSA's greater than a million (Los Angeles, San Diego, San Francisco, and Seattle). Thus, not only have Negroes from the South, and by inference from the *Core* South, moved to large metropolitan areas, they have moved along clear-cut lines to their destinations, forming at least three major streams, one up the eastern seaboard, another up the Mississippi River to Ohio and Michigan, and one westward to California.

TABLE 4.—*Net migration from southern counties 1950–60 by extent of urbanization*

Type of county	White		Negro		Total	
	Absolute	Rate	Absolute	Rate	Absolute	Rate
All rural	−812.6	−15.5	−421.8	−24.7	−1,234.4	−17.8
1 to 29 percent urban	−1,113.2	−13.5	−745.7	−25.1	−1,858.9	−16.6
30 to 49 percent urban	−371.3	−4.3	−476.5	−17.9	847.9	−7.6
50 to 69 percent urban	274.5	+4.6	−71.6	−5.9	202.8	+2.8
70 percent or more	2,065.3	+13.2	257.4	+5.8	2,322.6	+11.5

Note: Minus sign indicates net loss through migration. Absolute figures in thousands.

Source: Bowles, Gladys K., and James D. Tarver. *Net Migration of the Population 1950–1960*, Vol. II, *Analytical Groupings of Counties*, p. 147–149.

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[5] An interesting example of "chain" migration is given in Lurie and Rayack (*11*).

The pattern is more diffused for whites. While whites from the three divisions also tend to move along these streams, there is a much greater willingness to cross longitudinal lines and to go to smaller places. Here a breakdown by Core-Appalachian South is particularly useful. The number of lifetime migrants from these areas to each non-South region by race is presented in table 5. White migrants to the Northeast and North Central regions are predominantly from the Appalachian States which account for 57 percent of this group, while the West gets a majority of its white migrants from the Heterogeneous South. Negro migration to the non-South is, of course, heavily based in the Core area. The importance of these distinctions is dependent on the educational and economic opportunities (or lack of opportunities) available to these specific groups in their home regions. These matters will be discussed in more detail below.

In any event, both northern and southern urban areas have had to cope with vast numbers of poorly prepared rural migrants. The percentage of the population living in various urban areas of the North born in the South is given in table 6. The central city figures given for Negroes are based on the reasonable assumption that all Negro migrants from the South moved to the central city of the SMSA of destination. Thus, the figures for Negroes vary from 12 percent for central cities over a million in the East North Central division to the 1 percent for SMSA's of 250,000 to a million in the Middle Atlantic region. Of particular interest is the number of white southerners migrating to medium-sized SMSA's of the East North Central and Pacific divisions (9 percent and 11 percent, respectively). A breakdown of the migrant group into those born in the South Atlantic, East South Central, and West South Central divisions would again reemphasize the patterns of both Negro and white migration.

TABLE 5.—*Lifetime migration from the South*

[In thousands]

Region of destination	Subregion of birth							
	Core South		Appalachia		Heterogeneous		Total South	
	Negro	White	Negro	White	Negro	White	Negro	White
Northeast	572	169	461	381	135	357	1,169	908
North Central	1,094	585	311	1,838	90	564	1,495	2,987
West	312	698	40	533	217	1,561	569	2,792
Total (non-south)	1,978	1,452	812	2,752	442	2,482	3,233	6,687

Source: Compiled from *U.S. Census, Special Report, State of Birth.*

TABLE 6.—*Percent of population living in nonsouthern metropolitan areas, born in the South*

Metropolitan area	White	Negro	Total
New England:			
Medium SMSA's	1.61	1.37	2.98
Large SMSA's	1.51	1.04	2.55
Middle Atlantic:			
Medium SMSA's	1.86	1.21	3.07
Large SMSA's	2.00	4.18	6.18
Center city of large SMSA's	....	7.45	....
East North Central:			
Medium SMSA's	9.38	3.86	13.24
Large SMSA's	5.66	6.49	12.15
Center city of large SMSA's	....	12.01	....
West North Central:			
Medium SMSA's	5.77	1.53	7.20
Large SMSA's	4.76	3.61	8.37
Mountain:			
Medium SMSA's	10.72	1.39	12.11
Pacific:			
Medium SMSA's	10.81	1.53	12.34
Large SMSA's	9.21	3.50	12.71
Center city of large SMSA's	....	9.42	....

Source: Compiled from U.S. Census Special Reports, State of Birth, 1960.

Large as these figures are, they seriously understate the impact of southern migration. Since many migrants leave before forming families, there is no allowance for the cumulative effect of migration on the "second generation." What is needed is a measure of "southern households" in any particular areas. Moreover, such a figure is useful in measuring the effect of southern migration on the labor force of the northern and western cities. Estimates of the southern born fraction of the working age (20 to 65 years) population of the various areas are given in table 7.[6] The percentages increase substantially so that 16 percent of the working age population of the largest East North Central cities and 12 percent

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[6] The estimation process involved the computation of the percentage of the populations of individual SMSA's between 20 and 65 years and the percentage of all lifetime migrants from each division (South Atlantic, East South Central, and West South Central) falling into this age group in 1960 by race. The product of these two numbers and the fraction of each SMSA accounted for by the specific inmigrant group gives the estimated percentage of persons 20 to 65 years old in the SMSA coming from the specific division, by race. These numbers were then aggregated to form table 7.

TABLE 7.—*Percent of population 20 to 65 years old living in nonsouthern metropolitan areas, born in the South*

Metropolitan area	White	Negro	Total
New England:			
Medium SMSA's.......	1.90	1.95	3.85
Large SMSA's.........	1.78	1.47	3.25
Middle Atlantic:			
Medium SMSA's.......	2.20	1.71	3.91
Large SMSA's.........	2.23	5.67	7.90
Center city of large SMSA's.............	....	9.78	....
East North Central:			
Medium SMSA's.......	11.68	5.49	17.17
Large SMSA's.........	6.91	8.92	15.83
Center city of large SMSA's.............	....	16.02	....
West North Central:			
Medium SMSA's.......	7.66	2.21	9.87
Large SMSA's.........	6.76	5.06	11.22
Mountain:			
Medium SMSA's.......	14.18	2.01	16.19
Pacific:			
Medium SMSA's.......	14.32	2.21	16.53
Large SMSA's.........	11.32	4.78	16.10
Center city of large SMSA's.............	....	12.34	....

Source: Compiled from U.S. Census Special Reports, State of Birth, 1960.

of the largest Pacific cities are southern-born Negroes. At the same time, the percentage of southern-born whites in the medium-sized SMSA's increases everywhere, with those on the Pacific Coast showing the greatest gains.

The important conclusion to be drawn is that rural outmigration from specific areas in the South becomes inmigration for specific areas outside (and for whites, inside) the South. Thus, the link between the rural Negro Core South and the large northern metropolis is a very strong one. Negro migration provides a substantial release of pressure for the southern economy (urban and rural)—pressure produced by high rural Negro birth rates and limited economic opportunity. The southern economy is similarly unable to provide for large numbers of whites, especially in the Appalachian region. Important evidence supporting the behavioral model implied by this interpretation of southern outmigration is presented in a recent discussion paper by the authors (*13*). Cross-sectional analysis of the counties of Mississippi (the Core southern State, par excellence) indicated that in addition to the effect of agriculture on outmigration, variables such as urbanization and manufacturing growth had more significant holding effects on the white than on the Negro population. Moreover, a regression study of the choice of destination of 5-year migrants from the Core South indicated that while Negroes were most attracted by large centers of population, whites were more drawn to areas of rapid employment expansion and seemed more reluctant to leave the South.

Characteristics of Lifetime Migrants

It is central to the view presented in this paper that southern-born white and Negro migrants are ill prepared for life in the metropolitan North. This implies that they are different from other residents of northern metropolitan areas. The southern-born migrant to the North is clearly and identifiably different if he is Negro. As we discuss more fully below, this fact is in itself of considerable importance given the problems created by the rapid growth of Negro ghettos in northern cities (*9, pp. 4–10*). However, our analysis implies that the migrants are different in other less visible ways as well. In particular, they are likely to be poorly educated, have high levels of unemployment and low incomes, and place disproportionate demands on welfare and public services. This section examines these propositions.

The published census data used in preceding sections do not provide detailed characteristics of lifetime migrants. However, such data can be obtained through cross-tabulation of the census one-in-a-thousand sample.[7] Analysis of this sample provides information on the education, labor force participation, unemployment, and income of residents by place of birth (i.e., the four major census regions, including the South). As discussed above, this regional aggregation is not ideal. The impossibility of disaggregating the South into the more homogeneous subregions of the Core, Appalachian, and Heterogeneous South results in a serious loss of information and obscures a number of important relationships. Even so, use of the sample enables us to examine directly a number of questions that can only be inferred from the published statistics. This analysis of the characteristics of southern migrants is limited to heads of households living in the North Central region in 1960. The North Central region is the recipient of the largest number of southern, and particularly Core southern, Negro migrants. In addition, it is probably somewhat more homogeneous than the remaining two regions, the Northeast and West.

The analysis of characteristics of lifetime migrants to the North Central region is based on a sample of 15,267 heads of households, randomly selected from a population representing an estimated 15.3 million household heads living in that region in 1960. Table 8 indicates the percentage of this group born in each region, by race.[8] It is not surprising that Negroes are more likely to be migrants, and particularly southern migrants, than whites. Seventy-five percent of the Negroes living in the North Central region were born in the South. These differences in proportions should not be allowed to obscure the fact that the number of North Central whites born in the South is larger than the number of Negroes; roughly 1.7 million as compared to 1.1 million. In SMSA's of over a million the positions are reversed; 426,000 North Central Negroes were born in the South as compared to 364,000 whites.

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[7] The 1960 census one-in-a-thousand sample provides large amounts of information on the characteristics of a random sample of the U.S. population. It is available both on cards and on magnetic tape for machine processing. The analyses presented here are based on the tapes.

[8] Those not reporting place of birth are allocated to other regions proportionally, a procedure we believe yields a conservative estimate of the population born in the South.

Education of Southern Migrants

Statistics on years of school completed, shown in table 9, clearly indicate that southern-born residents of the North Central region, whether white or Negro, have completed fewer years of school than those born elsewhere. This finding is of particular significance since many writers on migration have minimized the potentially harmful effects of inmigration to urbanized areas on the grounds that migrants tend to be better educated than nonmigrants. While this may be true in general, it is distinctly not the case when comparing lifetime migrants from the South with other residents of the North Central region. Undoubtedly, the differences would be even greater if southern *rural* migrants could be isolated. A sampling of figures from table 9 illustrates these differences. For example, 13 percent of all southern migrants living in SMSA's of over a million completed less than 5 years of school as compared to only 2 percent of those born in other parts of the country. To a significant degree this difference is due to the very low educational achievement of southern-born Negroes. Fully 20 percent of this group had completed less than 5 years of school as compared to 7 percent for Negroes born in other parts of the country. To some extent this may be due to the fact that the Negro popula-

TABLE 8.—*Heads of households by place of birth and race: North Central Region and SMSA's greater than 1 million*

Place of birth[1]	Entire region			SMSA's greater than 1 million		
	Negro	White	All	Negro	White	All
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Same State	18.8	65.6	63.0	17.1	56.9	52.7
North Central	4.8	14.3	13.8	5.0	14.2	13.2
Northeast	1.0	3.9	3.7	0.7	6.2	5.6
West	0.2	0.8	0.8	0.2	0.8	0.8
South	74.8	7.6	11.3	76.5	7.7	15.0
Foreign born	0.4	7.7	7.3	0.5	13.9	12.5
Other	.....	0.1	0.1	.....	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
	Thous.	*Thous.*	*Thous.*	*Thous.*	*Thous.*	*Thous.*
Number	882	14,385	15,267	602	4,854	5,456

Source: Tabulated from the census one-in-a-thousand sample.

[1] Not reported allocated proportionally, within each column.

TABLE 9.—*Percentage of native-born heads of households with given amounts of education, by region of birth: North Central region*

Residence and schooling	Born in South			Born in rest of country		
	Negro	White	All	Negro	White	All
Entire region:						
Less than 5 years	21.5	9.3	13.7	7.7	2.9	3.0
8 years or less	62.5	51.7	55.7	35.4	36.2	36.2
Some college	5.8	12.5	10.1	9.6	18.5	18.3
SMSA's greater than 1 million, entire SMSA:						
Less than 5 years	20.2	5.2	13.3	7.5	2.1	2.4
8 years or less	60.9	42.8	52.5	31.8	28.9	29.0
Some college	5.8	16.5	10.8	9.2	22.8	22.2
Central cities:						
Less than 5 years	19.1	5.1	15.0	7.0	2.6	2.9
8 years or less	59.9	44.9	55.5	28.5	33.8	33.4
Some college	6.7	13.9	8.8	9.5	19.1	18.4

Source: Tabulated from census one-in-a-thousand sample.

tion born outside the South is generally younger. There is a negative relationship between years of school completed and age. However, significant differences remain even after standardizing for age. Similarly, the proportion of southern whites completing less than 5 years of school is more than twice that of whites born outside the South. Again it should be emphasized that these differences would be even more pronounced if migrants from the Core, Appalachian, and Heterogeneous South could be identified separately.

Labor Force Participation and Unemployment

Labor force participation and unemployment rates of native-born heads of households by residence, race, and place of birth are presented in table 10 for the North Central region. These figures are somewhat more difficult to interpret than those presented for education, but are no less relevant. The most interesting finding is that southern-born Negroes have lower unemployment rates than those born in the rest of the country, although the rates for both are substantially higher than those of either northern- or southern-born whites. The rate for southern-born Negroes residing in central cities of SMSA's of more than 1 million is 9.3 percent as compared to a rate of 12.9 percent for those born outside of the South. The rates for southern-born whites and whites born elsewhere are 5.0 and 3.9 percent, respectively. This suggests that discrimination against Negroes may be so dominant that differences in education and other factors are less important than for whites. The finding may also be attributable to the fact that unemployed Negroes born outside of the South are younger than those born in the South. The extreme difficulties of the Negro teenage job seeker have been documented by other researchers (*15*). The remainder of the difference is very likely due to the lower labor force participation rates of southern-born Negro heads of households.

In contrast, the situation of southern-born whites is much less favorable than that of whites born in other parts of the country. Unemployment rates of southern-born whites residing in metropolitan areas of over a million are 6.1 percent, more than twice as high as the 2.7-percent rate for whites born elsewhere. For the region as a whole, the rates for southern whites are 6.4 percent as compared to 3.1 percent for whites born outside the South. Like the situation for Negroes, labor force participation rates operate in the opposite direction.

Below the Poverty Line

Analysis of the census one-in-a-thousand tape suggests that roughly 8.6 million persons in the North Central region belong to a household below the poverty level ($3,000 for families and $1,500 for unrelated individuals). About 7.5 million are members of families and 1.1 million are unrelated individuals. Of these 8.6 million poor persons 1.3 million or roughly 16 percent belonged to families with a southern-born head of household. For metropolitan areas of over a million, fully a third of all poor persons belong to families headed by an individual born in the South. Households headed by southern-born Negroes alone account for a fourth.

Education of the Southern Migrant

We have already suggested that the southern migrant's lack of education is an important determinant of the low income he is likely to earn in the North. The question now becomes one of explaining why the southerner and in particular the southern migrant is so poorly prepared for the labor market. Formal education is by no means the only form of investment in human resources. While on-the-job training, experiences in the home, and other kinds of experiences may be of great importance, only the most limited information concerning these fac-

TABLE 10.—*Labor force participation and unemployment rates of native born heads of households, by residence, race, and place of birth: North Central region*

[Percent]

Work status, and residence	Negro, born in—		White, born in—		All native born, born in—	
	South	Rest	South	Rest	South	Rest
Labor force participation rate:						
Entire region	77.9	79.6	85.8	82.4	82.9	82.4
SMSA's greater than 1 million	76.5	79.8	90.4	86.9	82.9	86.6
Central cities, SMSA's greater than 1 million	76.7	78.5	88.0	83.4	80.0	83.1
Rate of unemployment:						
Entire region	8.1	11.1	6.4	3.1	7.0	3.2
SMSA's greater than 1 million	9.2	11.6	6.1	2.7	7.6	3.0
Central cities, SMSA's greater than 1 million	9.3	12.9	5.0	3.9	7.9	4.6

Source: Tabulated from the census one-in-a-thousand sample.

tors is available. Granted that other types of training and experience should not be overlooked, it is difficult to deny the importance of a minimum amount of formal education. If anything, the need for minimal skills in reading, writing, and mathematics seems to be increasing. Also several studies indicate that an individual's income is strongly dependent on his educational background (*8*). It is implicit in most discussions of poverty that lack of education is a major restraint to a decent standard of living. To the extent that poverty is a product of poor education, it is not difficult to understand why the rural South is poor. The same inference obviously applies to the rural southern migrant to the northern metropolis.

While southerners in general receive a poorer education than individuals in the rest of the country, it is no surprise that the situation for the southern Negro is substantially worse. In large part this is due to decades of systematic discrimination in the provision of public education, the concentration of Negroes in small towns and rural areas, and low levels of income. Data on the fraction of persons 25 years and over who have completed fewer than 5 years of school, by region of residence in 1960 and by race, are presented in table 11. Five years of good schooling would appear to be close to the minimum level of educational preparation needed to perform most tasks in an industrialized society. There is every indication that 5 years of education in a southern school, and particularly in a southern Negro school, represents substantially less. The most striking finding in table 11 is the large difference in the proportion of whites and nonwhites with at least 5 years of formal education. In 1960, 24 percent of the Negroes and 7 percent of the whites in the United States failed to meet this standard. In the South, especially the Core South, the proportions are still larger: 39 percent of the Negroes and 11 percent of the whites. Outside of the South the percentages of Negroes and whites with less than 5 years of school are only about half as large. If these data were by region of birth rather than region of residence the discrepancies might be even greater. At least there is no doubt that a large portion of the poorly educated Negroes living in the North and West received their few years of education in the South.

TABLE 11.—*Percent of persons 25 years and over completing less than 5 years of school, by region and race: 1960*

Region	White	Non-white	All
United States	6.7	23.5	8.3
Northeast	6.6	12.9	7.0
North Central	4.8	14.0	5.4
West	4.8	16.0	5.6
South:	10.0	31.8	14.0
Core	10.6	39.2	18.3
Appalachia	11.6	29.3	14.2
Heterogeneous	8.5	23.1	10.6

Source: U.S. Office of Education, *Digest of Educational Statistics, 1965 Edition*. Bul. 1965, No. 4, 1965. p. 129.

Information about the quality of formal education is neither plentiful nor systematic. However, the fragmentary data indicate that the products of southern schools, and particularly southern Negro schools, are markedly inferior to those of the North. The inadequacies of southern schools became widely recognized during World War II as a result of the nation's experience with the draft. Large-scale screening under the Selective Service Act of 1940 provided substantial evidence of the low quality of southern schools. At the end of the war, the Selective Service System analyzed a 20-percent sample of all men who had been rejected for military service after their initial examination. A major reason for rejection was failure to pass a standardized intelligence test which led to a classification of "mentally deficient." For the entire United States approximately 4 percent of the registrants were rejected on this basis (*6, p. 42*). Rejection rates for the Southern States, and particularly for southern Negroes, were much higher. The rejection rates for reason of "mental deficiency" by region and subregion within the South are given in table 12. The rejection rate for southern whites, 4.9 percent, was somewhat higher than the national average and almost twice the rejection rate of all whites. For all Negroes the rejection rate was 15 percent and for southern Negroes it was 18 percent. An even more interesting pattern appears for the southern subregions. Negro rejection rates within the South are highest for the Core South. Rejection rates for southern whites exhibit a somewhat different relationship, being lower for Core South whites than for Appalachian whites. This is a pattern that will reappear throughout this discussion of southern education.

There is considerable evidence that the Core South has provided a relatively high level of education for its white population at the expense of its Negro population. That is, it appears that the Core South has more strongly discriminated against the Negro in education and has provided a relatively higher level of educational opportunities for its white population than other parts of the South. By comparison, the Appalachian South seems to have provided somewhat better educational opportunities for its Negroes and poorer educational opportunities for its whites (as compared to whites in the Core South). These differences in education available to Negroes and whites in the subregions of the South are of particular importance given the marked difference in their migration patterns. It appears that the North obtains the worst of both worlds: the most poorly prepared Negroes from the Core

TABLE 12.—*Selective Service system rejections for "mental deficiency," by region and race*

Region and State	White			Nonwhite		
	Examined	Rejected	Rate per 1000 registrants	Examined	Rejected	Rate per 1000 registrants
United States	15,652,000	391,300	25	2,138,816	325,100	152
Rest of United States	10,615,509	143,600	14	517,048	26,200	51
South	5,036,491	247,700	49	1,621,768	298,900	184
Core						
Mississippi	167,857	4,700	28	162,927	33,400	205
Alabama	295,745	13,900	47	147,196	31,500	214
Georgia	309,756	12,700	41	148,058	30,500	206
South Carolina	193,022	8,300	43	123,105	34,100	277
Louisiana	256,364	14,100	59	151,822	37,500	247
Arkansas	242,373	14,300	59	75,000	15,900	212
Core total	1,465,118	68,000	46	808,108	182,900	227
Appalachia						
Tennessee	365,625	23,400	64	81,667	9,800	120
Kentucky	384,375	24,600	64	34,247	2,500	73
North Carolina	430,645	26,700	62	172,727	36,100	209
West Virginia	285,714	12,000	42	18,966	1,100	58
Virginia	340,678	20,100	59	114,045	20,300	178
Appalachia total	1,807,037	106,800	59	421,652	69,800	166
Heterogeneous						
Maryland	264,706	4,500	17	61,654	8,200	133
Delaware	33,333	600	18	7,292	700	96
District of Columbia	75,000	300	4	36,207	2,100	58
Florida	228,571	4,800	21	110,811	16,400	148
Texas	852,381	53,700	63	152,830	16,200	106
Oklahoma	310,345	9,000	29	23,214	2,600	112
Heterogeneous total	1,764,336	72,900	41	392,008	46,200	118

Source: Ginzberg, Eli, and Douglas W. Bray, *The Uneducated*. New York: Columbia Univ. Press, 1953. pp. 42–53.

South and the most poorly prepared whites from the Appalachian South.

The Office of Education Report, *Equality of Educational Opportunity*, popularly referred to as the Coleman Report, provides recent confirmation of the inadequate state of southern education (*3*). It presents average achievement scores for Negro and white students in the 1st, 3rd, 6th, 9th, and 12th grades. By the 12th grade, Negro students in the metropolitan South had an average verbal ability 4.2 grades below white students in the metropolitan Northeast. The verbal ability scores of Negroes in the nonmetropolitan South was even worse; 5.2 grades behind. By comparison, southern whites did much better. Those in the metropolitan South were less than 1 year behind (0.9) and those in the nonmetropolitan South, 1.5 years behind northeastern whites. Unfortunately, the manner in which the test scores are presented does not permit us to obtain scores for our three southern subregions. This probably obscures important differences between the educational performance of the southern Negroes and whites in these subregions. Other information suggests that the Core and Appalachian South differ importantly in their expenditures on white and Negro education and in the quality of schooling provided these groups.

While the scores presented in the Coleman Report indicate that both southern whites and Negroes test somewhat below their counterparts in other parts of the country, the most striking finding is the low level of educational achievement of Negroes regardless of region of residence. Twelfth grade Negroes in the metropolitan Northeast and Midwest average 3.3 grades in verbal ability behind metropolitan northeastern whites. True, this is nearly a grade better than the performance of Negroes in the metropolitan South and nearly two grades better than Negroes in the nonmetropolitan South, but it is hardly a record the metropolitan North can be proud of.

In part, these low levels of Negro achievement in the metropolitan North and West are due to many of the same factors that explain the low levels of achievement of southern Negroes. Prominent reasons include discrimination in the provision of education and low levels of motivation. However, the low levels of achievement of northern Negroes are also due indirectly to the decades of underinvestment in southern Negro education and directly to the fact that many Negroes currently enrolled in northern schools obtained their early years of education in the South. This not only affects the migrant child's achievement in the North but also disrupts the operation of these already hard-pressed schools which now are faced with the additional task of compensating for the early years of education in inferior southern schools.

These low achievement levels of both whites and Negroes educated in the South, and particularly of Negroes educated in the Core South, are not difficult to understand when the educational expenditures by Southern States are compared to those of other parts of the country. Data on average current expenditures per pupil (based on average daily attendance) in dollars and as a percentage of the U.S. average by region for the years 1964–65, 1955–56, 1945–46, and 1929–30 are presented in table 13 (*21, pp. 8–9; 22, pp. 64–65*). For the entire South, the level increased from 64 percent of the U.S. average in 1929–30 to 78 percent in 1955–56; in 1965–66 it amounted to 76 percent. Per pupil expenditures in the Core South are consistently below this level for the entire period, being only 44 percent of the U.S. average in 1929–30 and 65 percent of the U.S. average in 1964–65. Dismal as these statistics may be, the actual situation may be even more unfavorable for the South. These figures are based on average daily attendance, and ratios of average enrollment to average attendance are higher in the South. Moreover, dropout rates are higher in the South than in other parts of the country, so that a smaller percentage of the school age population is attending school at any one time.

Similarly, there are possible sources of bias in the opposite direction. Per pupil expenditures for current outlays may exaggerate the difference between the quality of schools in the North and the South because of differences in the cost of inputs. It may be possible to produce a given quality of educational opportunity in the South less expensively than in the North. It is clearly the case that teachers' salaries, the largest component of current expenditures, are considerably higher in the North.[9] While differences in teachers' salaries may explain much of the differentials in per capita expenditures in a numerical sense, they do not at all invalidate the comparison. There is considerable evidence that teachers in southern schools have poorer education and fewer years of education than teachers in northern schools.

As serious as these large discrepancies in the level of per pupil expenditures may appear, they are only one facet of the southern educational system relevant to the metropolitan North. There is substantial evidence that the investment in the education of migrants from the South may be well below the average level for the entire South. As is discussed above, migration from the South to the North is highly selective. Southerners migrating to the North are likely to be Negro and are drawn disproportionately from States where the overall level of per pupil expenditures tends to be low. The overrepresentation of southern Negroes in the migration streams to the metropolitan North is of particular significance since there is abundant evidence of systematic discrimination against Negroes in the provision of public education in the South. While practices in this respect may have improved in recent years, it still appears that less is spent on the southern Negro, who consequently receives an extremely poor education.

Prior to 1954 when school segregation was ruled unconstitutional by the Supreme Court, 17 States and the District of Columbia maintained separate school systems for Negro and white children. Thus, it is possible to obtain fairly systematic and reasonably accurate information on per pupil expenditures for Negro and white school children before 1954. Data on per pupil expenditures for whites and Negroes in a number of the Southern States operating segregated school systems are given in table 14. The statistics for 1953–54 are for total expenditures for instruction per pupil in average daily attendance, while those for all other years are current expenditures (including administration, maintenance, etc.). In all years the data indicate that Southern States (with the single exception of Okla-

TABLE 13.—*Current expenditures per pupil in average daily attendance in public elementary and secondary schools, and ratio of U.S. average, by regions* [1]

Region	Expenditures per pupil				Percent of U.S. average			
	1964–65	1955–56	1945–46	1929–30	1964–65	1955–56	1945–46	1929–30
United States	$484	$294	$136	$87	100.0	100.0	100.0	100.0
Northeast	539	322	161	101	111.4	109.5	118.4	116.1
North Central	481	304	148	96	99.4	103.4	108.8	110.3
West	508	318	156	106	105.0	108.2	114.7	121.8
South	369	230	97	56	76.2	78.2	71.3	64.4
Core	316	195	70	38	65.3	66.3	51.5	43.7
Appalachia	331	191	88	50	68.4	65.0	64.7	57.5
Heterogeneous	452	297	131	80	93.4	101.0	96.3	92.0

Sources: U.S. Office of Education, *Statistical Summary of Education: 1955–56* (U.S. Government Printing Office, Washington, D.C., 1959), p. 110; Idem., *Digest of Educational Statistics, 1965 Edition*, p. 66.

[1] Per pupil expenditures for regions are simple unweighted averages of State per pupil expenditures.

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[9] For example, the average annual salary of instructional staff in full-time public elementary schools in 1961–62 was $6,770 in Connecticut, $6,941 in New York, and $6,300 in Illinois. By comparison, they were only $3,685 in Arkansas, $3,637 in Mississippi, and $3,865 in South Carolina. Instructional staff in these comparisons includes supervisors, principals, classroom teachers, and other instructional staff (*21, p. 38*)

homa) spent significantly less per pupil on Negro students. The high figures for Oklahoma reflect the fact that with only 36,000 Negro pupils in 1953–54 a segregated system of education was expensive. It is perhaps not surprising that Mississppi, Arkansas, Georgia, and Alabama seem to be the most deficient in their efforts to educate their Negro populations. On the positive side, the narrowing of the difference between white and Negro per pupil expenditures between 1945–46 and 1951–52 suggests some attempt to improve the level of educational opportunity available to southern Negroes. The smaller differentials in the 1953–54 figures for instructional purposes may indicate that much of the noninstructional expenses of the Negro schools were included in the expenses of the white system. Alternatively, the Negro system may just not have gotten these services. In any case, the apparent improvement should be viewed with some caution, since increased Federal pressure over the period may have caused southern school officials to be less candid at the later date.

In part, the differences in per pupil expenditures for Negro and white schools may reflect differences in the degree of urbanization of the two populations. Per pupil expenditures are generally higher in more urbanized areas.[10] But the differential degree of urbanization of Negroes and whites can explain only a part of the expenditure gap. More importantly, it explains very little of the even larger difference that existed before World War II.

One of the most comprehensive studies of Negro education before World War II was prepared under the direction of Thomas Jesse Jones for the U.S. Bureau of Education (*16*). The report, *Negro Education*, published in 1917, provides a survey of Negro education during the period immediately preceding World War I. Estimates of public expenditures per capita for Negroes and whites were obtained by dividing total salaries for teachers in Negro and white schools by the number of Negro and white children 6 to 14 years of age. As smaller proportions of Negro children were in school, this exaggerates the discrepancy between the white and Negro per pupil expenditures for those students actually in school.[11] On this basis they found per capita expenditures in the Southern States to be $10.32 for each white child and $2.89 for each Negro child. Moreover, they determined that expenditures per school age child differed widely among Southern States. Using the Southern subregions defined above, the per child expenditures in the Core South were $1.98 for Negroes and $11.97 for whites. Comparable statistics for the Appalachian South were $3.50 for

TABLE 14.—*Current expenditures per pupil in average daily attendance for white and Negro public elementary schools*

State	1945–46		1947–48		1949–50		1951–52		1953–54 [1]	
	White	Negro	White	Negro	White	Negro	White	Negro	White	Negro
Alabama	$85	$38	$123	$75	$130	$93	$172	$108	$112	$105
Arkansas	74	35	103	60	124	73	138	77	99	72
Delaware	158	125	.....	.....	.....	.....	.....	.....	.....	.....
Florida	135	62	177	113	196	137	221	160	176	161
Georgia	83	31	127	59	145	80	190	115	.....	.....
Kentucky	90	98	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana	136	44	.....	.....	.....	.....	.....	.....	165	122
Maryland	130	111	201	165	217	199	254	201	.....	.....
Mississippi	75	15	115	24	123	33	147	32	98	43
Missouri	138	133	.....	.....	.....	.....	.....	.....	.....	.....
North Carolina	86	70	114	96	148	123	186	150	132	125
Oklahoma	111	118	143	168	.....	.....	.....	.....	162	166
South Carolina	100	40	146	68	155	80	196	98	.....	.....
Tennessee	80	56	.....	.....	.....	.....	.....	.....	.....	.....
Texas	123	91	.....	.....	.....	.....	.....	.....	.....	.....
Virginia	96	77	.....	.....	.....	.....	.....	.....	.....	.....
West Virginia	101	111	.....	.....	.....	.....	.....	.....	.....	.....
District of Columbia	190	149	.....	.....	290	221	345	261	240	187

Source: U.S. Department of Health, Education, and Welfare, *Biennial Survey of Education in the United States, 1945–46, 1947–48, 1949–50, 1951–52, 1953–54*, Chapter 1: *Statistical Summary of Education.*

[1] Total expenditures for instruction per pupil in average daily attendance.

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[10] For example, a 1955–56 survey for 38 States indicated that for the entire United States per pupil expenditures in rural counties were $237 per pupil in average daily attendance as compared to $305 for cities of 25,000 to 99,999 population and $333 for cities of over 100,000 population. Rural counties in the South spend an average of $174 per pupil as compared to $203 for the smaller cities and $222 for the larger (*23, p. 55*).

[11] It would have been valuable to have per capita expenditures based on attendance or enrollment. However, the authors report that attendance and enrollment statistics were neither uniform nor accurate enough to provide consistent estimates and suggest that a per capita figure based on enrollment is not as significant as one based on school age population as a measure of financial interest in the schools, because enrollment is to a considerable extent dependent on the appropriations made.

Negroes and $7.81 for whites; those for the Heterogeneous South were $6.18 for Negroes and $11.73 for whites.

Though there was considerable difference among the States and subregions of the South in the level of school expenditures for whites and Negroes, the divergence among counties according to their proportion of Negro school age population was even larger (appendix, table 22). The inequality increases as the proportion of Negroes in the county population increases and is greatest in those counties with the highest proportion of Negroes. The expenditures per capita are roughly the same in counties with less than 10 percent Negro population, $7.96 per capita for Negroes and $7.23 per capita for whites. They are most dissimilar in counties with over 75 percent Negroes, $22.22 per capita for whites and $1.78 per capita for Negroes.

These results, surprising even for the early period under discussion, are attributable to the then prevalent method of allocating State education funds among counties. These funds were assigned to the counties on the basis of total population without regard to race. Thus, a large Negro population was as much of an asset to a county school system as a large white population. Funds were then divided between the races by the county board of education and supplemented by local taxes voted by the county. Accordingly, appropriations for Negro schools were almost entirely dependent on the local sentiment of the white school board. In the counties with populations less than 25 percent Negro, the comparatively high per capita figures for Negro children are due to the high cost of maintaining schools for a scattered population.[12]

Causes of Underinvestment in Education

The determinants of the level of educational expenditure by State and local government are many and complexly interrelated. They included the community mores and attitudes toward education, the proportion of children attending private and parochial schools, the ratio of school age children to the economically active population, the degree of urbanization, and the cost of providing a given quality of education. Yet there can be no doubt that the most important explanation of the low level of expenditure by Southern States is the level of per capita income.

When average current expenditures per pupil in average daily attendance for all 50 States are plotted against State per capita income, they clearly indicate a strong positive relationship between per capita income and per pupil current expenditures for education. Low levels of educational expenditures appear to be both a cause and an effect of low income. With relatively few exceptions, the States of the Core and Appalachian South spend less on education per pupil and have the lowest incomes. For example, in 1965 Mississippi spent the smallest amount per student ($317) and had the lowest per capita income ($1,566). South Carolina, Alabama, and Arkansas did not exceed Mississippi's per pupil expenditure rate by much, and all had per capita income below $2,000 per year. In the Core South only Louisiana had a level of per pupil expenditures above $450 per year. These problems are compounded by the fact that the South has a relatively large school age population in terms of its economically active population.

If the educational effort of the South is compared to its per capita income levels, its performance is much more credible. For the United States as a whole, direct expenditures of State and local governments for education amounted to 5.2 percent of per capita income (*21, p. 137*). All 6 Core States, all 5 Appalachian States, and all Heterogeneous States except Delaware and Maryland exceeded this percentage. Unweighted averages of State and local education expenditures were 5.7 percent of the per capita incomes of the 6 Core South States, 5.6 percent of those of the Appalachian South, and 5.2 percent of those of the Heterogeneous South. Unfortunately, this effort by Southern States buys fewer educational inputs as a result of their low levels of per capita income. Average per capita expenditures for education by State and local governments were $127 for the entire United States. By comparison, those for the Core South were $93, for the Appalachian South, $108, and for the Heterogeneous South, $127 per capita. North Carolina made the greatest effort of any of the Southern States in 1963 by spending fully 7.3 percent of its per capita income on education, a level of effort exceeded by only 4 of the 50 States. However, 14 States exceeded North Carolina's per capita expenditures on education of $149 per year because of their higher levels of per capita incomes.

The Shed

The discussion presented up to this point is aimed at identifying the narrow self-interest of northern metropolitan areas. The necessity for action along any possible lines—education, economic development, or supplemental income for impoverished families—must finally hinge on the expectation that the trends outlined above will continue into the future. The central question becomes whether or not the rural southern population, white and Negro, will produce a high excess population in the future. The answer would appear to be yes.

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[12] While current statistics do not allow such honest interpretations, there can be little doubt that this type of mechanism for the allocation of educational funds was operative at least until 1954 and most likely well into the present decade. Higher per capita figures for the border States are partly due to the wider distribution of Negroes and the consequent necessity of providing a much larger number of schools with but a few pupils. It is also partly explained by the fact that the border States had a higher number of high schools for Negro pupils. There is a striking parallelism between the Negro right to vote in these border States and the better school facilities provided.

Table 15 gives the number of *male entrants* into the rural labor force by race and region for the 1960's, based on the assumption of no net migration. Two figures of particular interest here are the large number of Negro entrants in the Core South, 331,000, and the even larger number of white entrants in the Appalachian South, 807,500. The figures for the total South have not changed much from the 1950–60 period, despite the high level of outmigration experienced by rural areas during that period. One reason for this is the high birth rates of southern rural areas.[13]

A perspective on the entrants into the rural labor force of the 1970's can be made by comparing the rural population under 10 years old in 1960 with the same group in 1950. There were 689,000 rural southern Negro males in 1960 as compared to 740,000 in 1950. Thus, there has been only a slight decrease in the cohort group that will be responsible for the bulk of Negro migration in the 1970's. Similarly, there were 2.0 million white southern males under 10 in 1960 as compared to 2.2 million in 1950.

While no figures are available on rural outmigration in the 1960's some total figures for the South are available. Most striking is the rate of Negro net-migration. Between 1960 and 1966, 600,000 nonwhites (net) left the South, at an average rate of 0.9 percent per annum.[14] This annual rate is roughly two-thirds of the average migration rate of the 1950's. If, as in that decade, metropolitan areas of the South had some small net inmigration of Negroes (a likely assumption for the 1960's), the conclusion follows that at least 600,000 Negroes left the nonmetropolitan areas of the South. The native white population showed a net outmigration in the period of about 100,000. This figure, however, is not highly informative since many whites moved into the South and the metropolitan-nonmetropolitan distribution cannot be so easily hypothesized.

Given that the above figures are only crude estimates of the trends in rural outmigration from the South, they still serve to emphasize that no sudden change in the extent of that movement is imminent. This is especially true for the Negro population. The origins of the current problem can be seen by combining the predicted number of entrants for the 1960's with the Department of Agriculture's replacement ratios which measure the number of entrants to the rural labor force per 100 departures through death or retirement, assuming no net migration (*1*). The ratio for southern rural Negroes moved up from 230 for the 1950's to 250 for the 1960's. This meant that 60 percent of the potential rural Negro entrants would not find jobs unless the number of rural jobs expanded *or* these individuals migrated out of rural areas. In actual numbers, this estimate would imply that 343,000 rural male Negroes would not find jobs in the 1960's as compared to 335,000 in the 1950's.[15] considering that the pace of technological change in agriculture has been continually accelerating in the Core South, there is little doubt that these estimates form a lower bound. Moreover, this discussion does not take into account any pull effects of metropolitan areas, but only relates to rural surplus. The situation for white males is only slightly better. The potential white surplus went from 872,000 to 854,000 between the 1950's and 1960's.

The general conclusions are clear: (1) Migration in the 1960's is of the same order as that of the 1950's. (2) There can be no significant decline in

TABLE 15.—*Entrants to the male rural labor force*
[In thousands]

Area	1950–60		1960–70	
	Negro	White	Negro	White
South	593	1,820	571.4	1,837.6
Core South	NA	NA	331.2	571.2
Appalachian	NA	NA	159.6	807.5
Heterogeneous	NA	NA	80.5	458.8

Source: Bowles, Gladys K., Calvin L. Beale, and Benjamin S. Bradshaw, *Potential Supply and Replacement of Rural Males of Labor Force Age, 1960–70*, U.S. Department of Agriculture, Economic Research Service, 1966.
NA = not available.

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[13] Thus, in 1950 (the last year in which an entrant to the 1960–70 labor force could be born) rural Appalachian States had uniformly higher white birth rates than the rest of the country, while Core States had Negro birth rates above the national Negro rate and far above national white rates. In 1965, birth rates were still among the highest in the country. According to the Public Health Service (*24*) the national white birthrate for 1950 was 22.7 births per 1,000 population. The rural white birth rate for Appalachian States varied between 21.7 for North Carolina (the only State below the national rate) and 25.4 for Kentucky. The rural Negro birth rate for Core South States varied from the 30.3 of Arkansas to the 38.4 of Mississippi.

[14] See (*17*). These figures are based on data from the Current Population Survey, and can be considered only rough estimates.

[15] These figures are based on multiplying the number of entrants by the fraction of surulus labor implied by the replacement ratio.

the absolute number of potential outmigrants from the rural South until the 1980's.

Conclusions and Policy Implications

We might do well here to retrace the somewhat complicated and often indirect path that has been followed in this paper. Our basic argument is that the metropolitan North has a major stake in the future of the rural southern population. The rural South is impoverished, a condition that alone might well justify concern, but we contend that there is an even stronger reason for a commitment on the part of the rest of the country. The fortunes of the metropolitan North are closely linked to those of the rural South through migration. (Again it is well to emphasize our generic use of the term North, since many of the potential migrants will move to western metropolitan areas). The North's biggest cities attract large numbers of rural Negroes from the Core South. Smaller northern areas draw disproportionately large numbers of Appalachian whites. Ironically, it is these groups that are relatively the worst prepared for coping with the complexities of the industrial, metropolitan North. The educational achievement of each is inferior to the majority of the southern population from which they come. Negroes of the Core South are especially disadvantaged in this respect. In analyzing the distribution of poverty in the north-central region of the country, we found that a substantial fraction of the metropolitan North's poor were born and educated in the South. This result applies to both north-central Negroes and whites. Finally, we have found no evidence to support the widely held view that rural southern migration to the North will soon abate. The base populations are just too large.

In reviewing the above analysis, we are struck by the contrast between the implications of migration from the rural South and the traditional view of mobility in the United States. The actual migration portends severe strain both on the metropolitan centers of the country and the individual migrants involved; the tradition evokes a vision of the workings of a free marketplace leading in the long run to an efficient distribution of economic activity. The former is bolstered by the increasing difficulties of the rural migrant and especially the tensions of the Negro ghetto; the latter is based on America's experience with both foreign immigration and the westward expansion. Resolution of these discrepancies can be made only by taking into account the changing characteristics of the metropolitan environment. Today's uneducated and unskilled must accept a relative position vastly inferior to that which they held earlier in the century. The long run may well have become too long, for it now implies several more generations of ill-equipped rural-urban migrants, continued underinvestment in education, and heavy burdens on the social institutions necessary to control and ameliorate these mistakes.

The need for public action follows directly from these propositions. What form this action should take is not so easily determined. We have identified two primary groups of interest in the rural South: the Negroes of the Core South who contribute so heavily to the problems of the metropolitan North and particularly its largest cities, and the whites of the Appalachian South who affect the medium-sized cities throughout the country. While many programs might be tailored to deal with problems faced by the migrant, these must perforce take the form of correcting mistakes made in the past with all the difficulties involved in such a venture. Therefore, a strong argument can be made for programs aimed at the two populations in question, not after they have arrived in the metropolis, but while they are still in the rural South.

In this light, the first and most obvious recommendation that can be made is to strengthen decisively the education received by southern rural children, white and Negro. The discussion on southern education both identifies this problem and suggests the magnitude of the task. Clearly, the difficulties in attracting talented teachers to depressed rural areas are substantial, but not necessarily greater than the similar problem of attracting these teachers, social workers, and policemen to the urban ghetto. Some emphasis on the former now could easily replace a great deal more effort on the latter at some future time. Education is particularly important for the rural Negro who needs all the aid he can obtain to work against the edge of discrimination. While it may be ironic that the Core South, the source of the major Negro migration, does a poorer job of educating Negroes than the Appalachian South, and the latter does a poorer job of educating whites than the Core South, these facts tend to simplify the choice of first targets among rural areas. The implied distribution of funds is justified by the fact that areas of high outmigration are (perhaps understandably) more reluctant than other areas to maintain and expand their educational systems.[16] At the same time there can be no compromise with the southern tradition of "noneducation" for its Negro population. It is important to recognize that just those States which uphold this tradition the strongest are exporting the greatest number of Negro migrants. In some real sense it is the southern establishment that has no right to interfere in the North's business and not vice versa.

A second policy that receives support from these conclusions is a renewed effort to equalize employment opportunities for Negroes in the South as part of an overall national program. In particular this would seem to be an important consideration in the Core South, an area where gains made in the past have been almost exclusively white. Even a redistribution of poverty between whites and Negroes might be a net gain in light of the cumulative nature of metropolitan ghetto poverty as compared to less constricting white poverty. However, it seems more reasonable to include such an objective in a wider program to increase southern nonagricultural employment and incomes. Indeed the politics and economics of the South may make equal opportunity feasible only when coupled to a substantial expansion of the economy.

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[16] Weisbrod (*25*) presents an interesting discussion of this point, including a quantitative analysis of the impact of outmigration on school expenditures. He finds a high negative correlation between these two variables.

The question has now been transformed into determining the most efficient (in both a human and economic sense) place for economic expansion. The major alternatives include rural industrialization in the South, metropolitan expansion in the South, and migrant-oriented job creation in the North. We admit to a bias, based on previous research, that rules against efforts of expanding employment opportunities of southern migrants in the metropolitan North; at least to the exclusion of even larger efforts in the South (*9, pp. 4–8*). It takes little specialized knowledge to identify as the major problem facing the large metropolitan areas of the North the task of assimilating their Negro population. Conditions have reached crisis proportions in many cities and increases in the populations of northern ghettos could prove disastrous. In fact, a major reason for aggressively expanding employment opportunities in the South is to permit a much larger attack on the problems of discrimination and poverty in the ghettos of the metropolitan North. Without a simultaneous effort to dramatically expand employment opportunities for disadvantaged southerners, efforts to alleviate poverty in the ghettos of the metropolitan North could prove counterproductive. A delicate equilibrium obviously exists between the poverty areas of the North and the South. Unless efforts to improve conditions in the metropolitan North are accompanied by efforts to expand opportunity in the South, the final consequences of programs aimed at employing the migrant in the metropolitan North may be to accelerate already uncomfortably large flows of ill-prepared Southern migrants. Consequently, the levels of unemployment, poverty, and distress might remain unchanged while the monumental problems of assimilation increase.

In analyzing the remaining alternatives, rural industrialization and metropolitan expansion in the South, it is important to consider the historic development of southern manufacturing and other nonagricultural industries. The experience of industralization in the South has generally differed from the northern pattern of concentration in large metropolitan areas. From the first "bring the mills to the fields" movement of Reconstruction, the rural areas and small towns of the South have accounted for substantial proportions of southern manufacturing activity. Standard Metropolitan Statistical Areas contain the majority of manufacturing employment in only one State of the Core South, Louisiana, and two of the Appalachian South, Kentucky and West Virginia. By contrast, all of the Heterogeneous States have a majority of their manufacturing employment in metropolitan areas. The implications of this dispersion of industry are of fundamental importance to the southern economy. In an extensive analysis of wage differentials in the United States, Fuchs found that quality adjusted wages for rural areas and small towns are significantly lower than for the entire South (*5*). It is to be expected that these low wages and the vast remaining pools of unskilled workers will continue to attract large numbers of firms using disproportionate amounts of low cost, low skilled labor. The benefits to the South of this continued development should not be minimized. These low-wage industries can serve both as a training ground for rural labor and as a substantial source of income.

At the same time the rapid expansion of southern metropolitan areas suggests a second form of southern economic development. The metropolitan South has been one of the most rapidly growing parts of the country. All U.S. metropolitan areas grew by 55 percent between 1940 and 1960, as compared to a growth in population of the entire United States of only 35 percent (*18*). By comparison, southern metropolitan areas grew by 84 percent between 1940 and 1960 (35 percent between 1940 and 1950 and 36 percent between 1950 and 1960). Only the expanding metropolitan areas of the Western United States grew at more rapid rates (48 percent between 1950 and 1960). Moreover, Fuch's data suggest that the expansion of employment in southern metropolitan areas is not greatly attributable to low wages, even though quality adjusted wage levels in southern metropolitan areas remain slightly lower than those of the North (*5, p. 19*).

This rapid growth of employment in southern metropolitan areas, like that of the metropolitan North, must be due to factors which increase the productivity of at least some firms at these locations and allow them to pay higher wages. These factors include economies of scale, agglomeration economies, and the access of a large local market.

Thus, to a significant degree southern growth potential may be tied to the development of metropolitan areas. From the viewpoint of the rural South, growth in these cities is no less desirable than rural growth. Expansion of economic opportunities, no matter where it occurs in the South, must of necessity be beneficial to the rural population. The basic remedy is one of taking up the slack in a surplus population; the exact point at which tension is applied is not crucial. If such tension is more efficiently created in metropolitan areas, this course of action should be accepted.

Our discussion thus becomes one of general southern development and the need to bring that region more in line with national levels of per capita income. This is the basic solution to the problems produced by rural southern outmigration. In particular, it is important to guarantee that an expansion of the southern economy be shared by the rural, especially the rural Negro, population. To a certain extent this process may be automatic. General prosperity and the resulting tightness of labor markets are perhaps the strongest forces for the integration of the Negro into the southern economy. Some evidence of this pattern is visible already in certain parts of the South. Osburn concluded from a study of Negro employment in the Carolina textile industry that the Negro labor force has made substantial gains since 1960 and that these gains are due to the abandonment of that industry's "exclusionary hiring practices as whites were attracted to higher paying industries and its need for labor grew." While the Negro is often hired for dead end jobs, "under tight labor market conditions, employers have more incentive to hire and train Negro job applicants and to upgrade Negro employees" (*12*).

Clearly the gains of general prosperity for poor rural Negroes and whites will be magnified to the extent that educational programs prepare them for these increased and improved opportunities. The gains to Negroes from stronger measures aimed against discrimination are even more obvious. Enforcement of equal opportunity laws for government contractors and subcontractors in the South is already increasing the openings for Negroes in southern industry and these efforts should be stepped up. Broader legislation is also desirable. The task of obtaining and enforcing such measures is substantially eased by a climate of general improvement. Economic expansion and the enforcement of equal opportunity are highly complementary.

An important perspective that derives from this discussion is the need to approach the obviously serious problems of southern rural areas as parts of a larger regional and national system. This is distinctly different from the current approach to depressed areas, which concentrates only on the worst or most distressed areas.[17] A more neutral policy aimed at general southern development is required. Thus, with respect to capital subsidies to industry, the best approach might be to allow the entrepreneur to locate anywhere he chooses within the South rather than attempt to bribe him into what may well be an inefficient location in a severely distressed rural area. The important point is that economic development in a city or metropolitan area 50 or even 200 miles away can be both advantageous to the rural poor and consistent with national economic trends. The goal is not so much to keep the rural southerner rural as to provide him with an opportunity to earn a decent income in a decent environment. Where the rural South and metropolitan North have failed at this task, the metropolitan South may well be able to succeed.

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[17] For example, the enabling legislature of the Economic Development Administration of the Department of Commerce limits its development to distressed areas. The agency has administratively decided, moreover, that the worst counties must be taken first (*14*).

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Appendix

TABLE 16.—*Number of families with incomes below $3,000 and unrelated individuals with incomes below $1,500, by residence and race: 1960*

Residence	South		Rest of U.S.		Entire U.S.		
	White	Non-white	White	Non-white	White	Non-white	Total
Families:							
Urban	1,230	764	2,720	513	3,950	1,277	5,227
Rural farm	606	223	729	11	1,335	234	1,569
Rural nonfarm	1,176	470	1,153	53	2,329	524	2,853
Total families	3,013	1,458	4,602	577	7,615	2,035	9,650
Unrelated individuals	1,456	559	3,892	416	5,347	976	6,323

Source: U.S. Bureau of the Census. *U.S. Census of Population: 1960.* Vol. I, *Characteristics of the Population.* Part I, *United States Summary.* 1964.

TABLE 17.—*Families with incomes below $3,000 and unrelated individuals with incomes below $1,500 as a percent of all poor families and unrelated individuals, by race and residence: 1960*

Residence	South		Rest of U.S.		Entire U.S.		
	White	Non-white	White	Non-white	White	Non-white	Total
Families:							
Urban	12.7	7.9	28.2	5.3	40.9	13.2	54.1
Rural farm	6.3	2.3	7.6	0.1	13.8	2.4	16.2
Rural nonfarm	12.2	4.9	11.9	0.5	24.1	5.4	29.5
Total	31.2	15.1	47.7	6.0	78.9	21.1	100.0
Unrelated individuals	23.0	8.8	61.5	6.6	84.6	15.4	100.0

Source: U.S. Bureau of the Census. *U.S. Census of Population: 1960.* Vol. I, *Characteristics of the Population.* Part I, *United States Summary.* 1964.

TABLE 18.—*Families and unrelated individuals by residence and race as a percent of all U.S. families and unrelated individuals: 1960*

Residence	South		Rest of U.S.		Entire U.S.		
	White	Non-white	White	Non-white	White	Non-white	Total
Families:							
Urban	14.8	3.2	48.9	4.0	63.6	7.2	70.8
Rural farm	2.6	0.6	4.2	0	6.8	0.6	7.4
Rural nonfarm	7.5	1.4	12.7	0.3	20.2	1.7	21.9
Total	24.9	5.2	65.8	4.3	90.5	9.5	100.0
Unrelated individuals	21.1	6.2	65.6	7.1	86.7	13.3	100.0

Source: U.S. Bureau of the Census. *U.S. Census of Population: 1960.* Vol. I, *Characteristics of the Population.* Part I, *United States Summary.* 1964.

Explanatory Note: Tables 19, 20, 21.

These tables give the percentage of outmigrants from each of the three census subregions in the South who now live in various regions of the country.

The regions are selectively broken down so as to indicate the differential migration of whites and Negroes to cities of various sizes. Moreover, a cumulative percentage is given to emphasize the magnitude of these differences.

TABLE 19.—*Percentage distribution of migrants from the South Atlantic division*

Present location	White		Negro	
	Distribution	Cumulative	Distribution	Cumulative
Northeast cities greater than 1 million	13.5	....	58.3	...
East North Central cities greater than 1 million	9.3	22.8	14.4	72.7
Northeast and East North Central, 250,000 to 1 million	11.0	33.8	9.6	82.3
Remainder Northeast + East North Central	~19.0	52.8	~7.7	90.0
West North Central + Mountain	8.2	61.0	1.2	91.2
Pacific cities greater than 1 million	8.9	69.9	2.6	93.8
Remainder Pacific	~6.0	76.3	~1.0	94.8
East South Central + West South Central cities greater than 250,000	9.3	85.6	2.7	97.5
Remainder East South Central + West South Central	14.4	100.0	2.5	100.0

TABLE 20.—*Percentage distribution of migrants from the East South Central division*

Present location	White		Negro	
	Distribution	Cumulative	Distribution	Cumulative
East North Central cities greater than 1 million	13.4	.....	40.6	.....
Northeast cities greater than 1 million	2.2	15.6	7.8	48.4
West North Central cities greater than 1 million	1.9	17.5	6.8	55.2
East North Central cities 250,000 to 1 million	7.2	24.7	8.4	63.6
Northeast + West North Central cities 250,000 to 1 million	1.0	25.7	1.6	65.2
Remainder East North Central	~17.4	43.1	~8.9	74.1
Remainder Northeast + West North Central	~3.0	46.1	~0.9	75.0
Mountain	3.1	49.2	0.8	75.8
Pacific cities greater than 1 million	5.5	54.7	5.9	81.7
Remainder Pacific	4.2	58.9	1.4	83.1
West South Central cities greater than 250,000	6.2	65.1	2.8	85.9
Remainder West South Central	9.6	74.7	5.0	90.9
South Atlantic cities greater than 1 million	3.9	78.6	1.4	92.3
South Atlantic cities 250,000 to 1 million	6.7	85.3	2.1	94.4
Remainder South Atlantic	~14.7	100	~5.7	100

TABLE 21.—*Percentage distribution of lifetime migrants from the West South Central division*

Present location	White		Negro	
	Distribution	Cumulative	Distribution	Cumulative
Pacific cities greater than 1 million	20.6	.....	36.3	.....
East North Central cities greater than 1 million	4.0	24.6	19.1	55.4
West North Central cities greater than 1 million	3.7	28.3	8.1	63.5
Pacific cities 250,000 to 1 million	9.8	37.1	5.4	68.9
Remainder Pacific	13.0	50.1	3.4	72.3
East North Central + West North Central cities 250,000 to 1 million	3.6	53.7	4.9	77.2
Remainder East North Central + West North Central	~12.7	66.4	~5.4	82.6
Northeast	4.1	70.5	4.4	87.0
Mountain	15.4	85.9	6.2	93.2
East South Central	6.3	92.2	4.0	97.2
South Atlantic cities greater than 250,000	3.9	96.1	1.5	98.7
Remainder South Atlantic	3.9	100	1.2	100

TABLE 22.—*Per capita white and Negro expenditures for teachers' salaries in Southern States, by county groups: 1911–12*

County groups, percentage of Negroes in the population	Entire South [1]		Core South		Rest of South	
	White	Negro	White	Negro	White	Negro
Counties under 10%	$7.96	$7.23	$6.98	$3.48	$8.16	$8.07
Counties 10 to 25%	9.55	5.55	7.24	2.63	10.11	6.33
Counties 25 to 50%	11.11	3.19	11.60	2.43	10.63	3.90
Counties 50 to 75%	12.53	1.77	12.88	1.65	11.48	2.20
Counties 75 to 100%	22.22	1.78	22.63	1.75	17.59	2.25
All	10.06	2.89	10.87	1.96	9.62	4.31

Source: U.S. Department of Interior, Bureau of Education, *Negro Education*, Vol. II, Bulletin, 1916, No. 39. Washington, D.C.: U.S. Government Printing Office, 1917, pp. 11, 27, 335, 471.

[1] 1,055 counties where per capita expenditures by race were available.

ACKNOWLEDGMENTS

This program is supported with funds from the office of Economic Research of the Economic Development Administration in the Department of Commerce, Project Number OER–015–G–66–1 and the Program on Technology and Society conducted at Harvard University under a grant from the International Business Machines Corporation. The authors of this paper also wish to acknowledge support from the M.I.T.-Harvard Joint Center for Urban Studies.

The authors take full responsibility for their views which are not necessarily those of the sponsoring organizations.

PART III

Health and Family Planning

Chapter 18

Health Needs and Services of the Rural Poor

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Introduction

The relationship between health and social well-being is reciprocal. It has long been known that poverty causes disease, insofar as the conditions of diet, housing, occupation, and behavior associated with poverty contribute to the genesis of illness, disability and, eventually, death. Rates of death and morbidity have long been highest among the lowest income groups (*1*).[1] The "causative" impacts of poverty on health involve both those factors influencing the biological occurrence of disease (e.g., spread and implantation of the tubercle bacillus) and other factors influencing the procurement of health services—preventive and curative.

On the other hand, disease has long been known to be a cause of poverty. A physically disabled person is unable to work and earn a living. On a broader scale, populations decimated with malaria or intestinal parasites show lower economic productivity than healthy populations (*2*). Chronic illness and its treatment may also sap the financial resources of a family, obstructing the education of its children or blighting its development in other spheres.

This reciprocal relationship between health status and social well-being or effectiveness operates in all types of geographic and social setting. Indeed, it probably applies to rural areas more than to urban, because in such areas, as we shall see, the resources for preventing and treating sickness are less developed. A specific disease or injury, therefore, is likely to have more far-reaching social consequences for a rural patient than for an urban patient who is more accessible to prompt medical care.

Without arguing about which force may be more powerful—disease as a cause of poverty or poverty as a cause of disease—there can be no doubt about the importance of good health in the maintenance of personal happiness and community progress. There can also be no doubt about the essentiality of good medical care within a modern standard of living. Regardless of the rate of *occurrence* of disease in a population, modern social policy demands the provision of scientific and humane medical service to cope with it.

An overflow of the problems of rural poverty, therefore, must examine both health needs—that is, disease and disability—and health services. The latter include the therapeutic and preventive services procured by individuals in the open market, so to speak, and those services provided by organized social programs launched under various auspices.

Rural poverty, of course, involves two social dimensions: rurality (in contrast to urbanity) and poverty (in contrast to affluence). Whatever handicaps—or, for that matter, assets—are implicit in rurality are further compounded by those implicit in poverty. This is especially true for health services, for which the rural environment creates distinct obstacles that are thornier for low income families within that environment. Much of the quantitative data on rural health services as well as rural health status, nevertheless, are available only along a rural-urban dimension, without further categorization of the rural *poor*. Other data are available along an economic dimension, without categorization of low income *country dwellers*. To permit some broad understanding of the problem, however, this account of health needs and services will focus mainly on the conditions among rural populations and in rural areas as a whole. It must be understood throughout that, within this context, the characteristics of the rural *poor* are nearly always worse. Within different subjects, "worse" has different meanings, but it generally means greater deficiencies in both quantity and quality of health service.

This account will be presented in three principal parts. First, some basic background features will be drawn on health needs among the rural poor:

- health status
- medical and related personnel
- hospitals and other facilities
- health services received

Second, an examination will be made of the principal organized programs now in operation to serve the health needs of rural populations:

- public health programs
- welfare medical services
- voluntary health insurance
- the Medicare law
- migrant family and other special rural programs
- further governmental health programs

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

- voluntary health agencies
- attracting doctors and others to rural areas
- regionalization and comprehensive planning

Finally, suggestions will be offered on:

- problems that must be solved.

In each of these 14 sections, the account will be brief, but it is hoped that the highlights will be clear. To provide data necessary for specific planning purposes, more thorough research would be required than was possible in the time available for preparing this report.

Health Status

In the early 19th century, cities were the hotbeds of disease, mostly infectious. The rural areas, by contrast, were salubrious places, and this was reflected by marked differentials in death rates among urban and rural populations. In 1900, the annual death rate of the U.S. urban population was still much higher than that of the rural; after standardization for age composition, it was 20.8 per 1,000 urban people and 13.9 for 1,000 rural people (*3*).

Improvements in urban living conditions and health services have greatly reduced this differential. Rural circumstances affecting health have also improved, but at a slower rate. The result is that whatever "natural" advantages for health the rural environment may once have had, in contrast to congested cities, they have been steadily lost. By 1940, the age-adjusted urban death rate had shot down to 11.4 per 1,000 per year, while the rural rate had descended proportionately less to a level of 9.9 per 1,000.

While current data for these parameters are not available (due to changing practices of the national agencies compiling health statistics), there is much indirect evidence to suggest that the distinction between overall rural and urban mortality has now almost vanished. The impact of a region's general economic development and its health technology has become so decisive, that the differentials in death rates of populations are greater between the geographic divisions of the United States than between rural and urban localities as such. The lowest age-adjusted death rate in the nation in 1959 (7.4 per 1,000) was in the West North Central States, which are highly rural, while the highest (8.5 per 1,000) was in the heavily urbanized Middle Atlantic States. Nearly as high as the latter, however, was the death rate (8.4 per 1,000) in the East South Central States (Mississippi, Alabama, Tennessee, and Kentucky), which are indeed highly rural and contain many isolated communities (*4*).

Comparison of the crude death rates (i.e., not adjusted for age composition or other elements) between States is deceptive because of marked differences in the percentages of children and aged persons in the population. For biological reasons (largely outside of social or medical control with current knowledge) the death rates of children everywhere are lower than those of old people. Thus, Massachusetts—with its high level of urbanism and economic affluence—had a crude death rate in 1965 of 11.4 per 1,000, compared with only 8.4 per 1,000 in rural and low income South Carolina. The principal explanation is that Massachusetts has relatively more old people and fewer children than South Carolina; with proper age adjustment, the death rate differentials almost disappear.

Among specific diagnoses, rural populations tend to have lower mortalities for the chronic diseases of later life—heart disease, cancer, and strokes—which are, indeed, the highest causes of death in the United States. They tend to have higher mortalities for the infectious and other currently preventable diseases and injuries. The epidemiological factors in back of these findings are highly complex, and any short explanation is bound to be faulty. Some comparisons for a few diseases in a few States of different rural-urban character are shown in table 1. To risk an oversimplification, it would appear that the conditions of rural life reduce the risk of death

TABLE 1.—*Death rates by selected causes in States of different urban-rural character, 1964*

State	Percentage urban	Cause of death (Death rate per 100,000 population)			
		Chronic diseases of the aged		Conditions more readily preventable	
		Heart disease	Cancer	Accidents	Diseases of early infancy
New York	85.4	448.8	183.9	41.8	30.2
Massachusetts	83.6	395.1	167.1	41.7	23.6
Mississippi	37.7	301.9	128.2	70.1	48.8
North Dakota	35.2	330.2	134.3	63.4	33.2

Source: U.S. Department of Health, Education, and Welfare (HEW), Public Health Service (PHS). *Vital Statistics of the United States, 1964*. Vol. II, "Mortality," Pt. A, Sec. 1, pp. 1–39.

for diseases which are chronic and afflict mainly the aged, while they increase the risk for infectious and traumatic conditions that with current knowledge are more readily preventable.

While the rural population still appears to hold some advantage over the urban in its record of deaths, the relationship is quite different for the burden of sickness during life. The continuing National Health Survey of the U.S. Public Health Service provides a rich series of data on morbidity, based on household interviews of the noninstitutionalized civilian population.

Considering acute conditions, the urban-rural comparisons are quite variable in different years, depending on such factors as the incidence of epidemic influenza and other respiratory disorders. Thus, for the period July 1961 to June 1962, the days of disability caused by acute illness in the different populations were as follows:

Place of residence	*Restricted-activity days from acute illness per 100 persons per year*
Urban	881
Rural nonfarm	875
Rural farm	894

The next year (1962–63), however, the rate of restricted-activity days from acute illness, in the same sequence was: 881, 881, and 837 per 100 persons per year. In both of these survey years, over half of all the volume (as measured by disabled days) of acute illness was due to respiratory tract disease in both urban and rural populations (5)

The comparisons for the burden of chronic disease are more consistent and, indeed, more significant. It is chronic disorder which causes the greatest overall loss of time from productive work, the greatest drain on family finances and family spirit. For such disorders, the prevalence is clearly higher in rural than in urban populations. Moreover, the burden is greatest in low income families of rural areas.

Because of problems of intercensal population estimates and other considerations, the scheme for classifying urban and rural populations has changed in the U.S. National Health Survey over the years. In the latest period, July 1963 to June 1965, data on chronic illness are available by Standard Metropolitan Statistical Areas (counties containing a city of 50,000 population or more plus contiguous counties which are socioeconomically integrated) and by other areas. The SMSA's contained in 1964 about 118,730,000 people who are basically urban, while the "other areas" contained about 67,065,000 people who are largely rural. The latter are divided between 55,345,000 nonfarm people and 11,720,000 farm-based people.

Using these categories, the prevalence of chronic disorders in the different populations, as of 1963–65 was as follows (6):

Type of area	Percent of persons with limitation of activity due to chronic illness			
	All ages	Under 45 years	45 to 65 years	65 years and over
SMSA's	10.5	4.7	17.1	43.4
Other areas:				
Nonfarm	14.5	5.7	24.1	56.2
Farm	16.5	6.4	27.3	58.9

It is evident that for all ages together, and each age group separately, the proportion of persons disabled in some degree by chronic illness is higher in rural populations, and the differential is greater for the middle and older age groups. Moreover, the burden is heaviest among farm families.

Taking a combined measure of disability from either acute or chronic disorders, the aggregate burden is also greatest among rural populations. In the period 1959–61, when the older rural-urban population classification was used, the U.S. National Health Survey found as follows:

Type of area	*Restricted-activity days from all conditions per 100 persons per year*	
	Males	*Females*
Urban	1,230	1,450
Rural nonfarm	1,340	1,610
Rural farm	1,670	1,710

In the more recent period, July 1963 to June 1964, when the SMSA scheme has been used, the relative findings for overall days of disability show essentially the same relationship (7):

Type of area	*Restricted-activity days from all conditions per 100 persons per year*	
	Males	*Females*
SMSA's	1,380	1,730
Other areas:		
Nonfarm	1,530	1,880
Farm	1,710	1,740

Analysis of the 1963–64 disability data shows that under 25 years of age, and especially under 5 years, the rural record of disability is actually lower than the urban. In the more economically important working years after 25, however, and especially in males, the rural record of disability is clearly higher. For men 45 to 64 years old, for example, the rate of restricted activity from all causes was 1,980 days per 100 per year in the urban SMSA's, compared with 2,310 days and 2,730 days per 100 per year in the nonfarm and farm populations outside the urban districts.

Military Selective Service examinations provide another measure of the health status of populations, as reflected by conditions among young males. Counting all causes for disqualification—physical as well as mental disorder or mental deficiency—

the national rate in 1965 was 44 percent. Among the 25 most urbanized States, the rejection rate exceeded 50 percent in three (Louisiana, Maryland, and Hawaii), while among the 25 most rural States, this high a rejection rate occurred in eight States (Mississippi, West Virginia, North Carolina, South Carolina, Maine, Tennessee, Alabama, and Georgia) (*8*). Many of these rejections reflect congenital disorders or uncorrected sequelae of past disease.

In all these indices of rural health needs, the burden is unquestionably heavier among the rural poor. In any location, the rate of disability has been found to be higher as family income declines. Using age-adjusted rates (thus canceling out the bias that might be caused by the lower income of aged persons), the National Health Survey found in the period July 1962 to June 1963 as follows (*9*):

Family income	Disability-days per 100 persons per year		
	Any restricted activity	Days in bed	Work loss
$7,000 and over	1,370	560	550
$6,999–$4,000	1,480	590	590
$3,999–$2,000	1,710	700	730
Under $2,000	2,280	970	860

A particularly heavy burden of illness is found in the rural population who are Negro and largely concentrated in the lowest income groups. And the problems of health service for nonwhite families is complicated not only by the handicaps of poverty but by the further obstacles of racial discrimination, which tends to be especially severe in rural districts.

With this bird's-eye view of health needs in the rural population and among the rural poor, we may turn to the personnel and facilities available to provide health service.

Medical and Related Personnel

Health status is determined by many factors in the environment, as well as in the biological reactions of the individual. The material and social environment lay the foundation for physical and mental health, but the reactions of the individual organism can be enormously influenced by the intervention of the healing arts. Physicians and a wide range of other health personnel are necessary to apply these skills.

In the rural areas of America, as elsewhere in the world, the supply of doctors and other health workers is much lower than in the cities. This has been true for at least a century and, while certain improvements have occurred (largely due to better transportation), the relative deficiencies are still serious. The increasing specialization of medicine has aggravated the traditional tendency of most physicians to engage in practice in urban centers, where medical facilities and other technical resources are most abundant.

In 1963, there were about 42 million persons in the United States living in isolated rural or semirural counties that were not even adjacent to a metropolitan county containing 50,000 people. In these sparsely settled counties there were located only 81 physicians per 100,000 population, compared with 132 in the metropolitan counties and those adjacent to them. The rural physicians, moreover, were mainly general practitioners, while in the metropolitan and nearby counties the vast majority were specialists in private practice or on hospital staffs (*10*). The general practitioner may have certain humanistic advantages, but he is rarely capable of providing the soundest scientific medical service for serious illness.

The basic facts are presented in table 2. It is not to be expected, of course, that every county in the nation should have the same ratio of doctors regardless of its degree of urbanization. Specialists may reasonably be expected to be concentrated in the

TABLE 2.—*Physician supply in counties of different urban-rural character (non-federal physicians per 100,000 population), 1963*

County group	Total	Private practice		Hospital staff, teaching, etc.	Retired
		General practice	Fulltime specialty		
United States	132	35	56	34	7
Metropolitan	143	35	63	38	7
Greater metropolitan [1]	181	38	80	55	8
Lesser metropolitan [2]	133	30	62	33	8
Adjacent counties	80	38	27	10	5
Isolated	81	38	27	10	6
Semirural [3]	87	38	31	12	6
Rural	50	38	6	2	4

Source: U.S. Public Health Service, *Health Manpower Source Book*, Sec. 18, "Manpower in the 1960's." Washington, 1964, p. 25.

[1] Population of 1,000,000 or more.

[2] Population of 50,000 to 1,000,000.

[3] Contains an incorporated place of 2,500 or more.

main cities, where people should come for the treatment of complex disease problems. But the 42 million people living in isolated counties, it should be realized, are a sizable distance from the cities; for the treatment of the vast bulk of their illness they must rely on the sparse supply of rural doctors in their local areas. Moreover, transportation to a distant city is often not accessible to low income people in rural districts.

Aside from these county comparisons, whole States of predominantly rural character tend to have much lower ratios of physicians, even counting the cities within those States, than the predominantly urban States. There are 12 States with 50 percent or more of rural population, but only one of them (Vermont) has a physician-population ratio higher than 105 per 100,000. On the other hand, among the 12 most urban States (74 percent urban or more), all but one (Texas) has a ratio higher than 125 physicians per 100,000. New York and Massachusetts each has about 200 doctors per 100,000, while South Carolina and South Dakota each has about 75 per 100,000. Over the last 25 years, the ratios of physicians in all these States have improved slightly, but the proportionate State supplies in relation to each other have remained about the same.

In a few States, osteopathic physicians contribute significantly to the supply of medical manpower. Over 15 osteopaths per 100,000 population are located in Maine, Iowa, Oklahoma, Missouri, Michigan, and California. Being mainly general practitioners, these doctors are more often located in small towns and rural areas. The quality of their training, however, suggests that the service they render does not meet current scientific standards. This is much more true of chiropractors, who are also settled somewhat more frequently in rural districts.

The prevailing pattern for private medical practice in the United States is the individual office, and this is especially true in small towns serving rural populations. In the larger cities, physicians have increasingly come to share office facilities, and the urban "medical arts building" has promoted communications between doctors even when they are in separate quarters. The busy urban hospital is a further channel for interchange. The relative isolation of the rural or small-town doctor, by contrast, deprives him of the stimulation necessary to keep abreast of the endless advances in medical science. A slow movement toward multispecialty group practice, which is found in certain rural regions, will be discussed in a later section.

The lack of specialists in most small towns leads the rural general practitioner to do more complicated surgery than his counterpart in the larger city. Bylaws of rural hospitals permit this, while in the urban centers the abundance of specialists usually results in more rigorous restrictions on the "surgical privileges" of general practitioners. This was confirmed in a recent study of several general practices in Alberta, Canada (which is much like the western mountain States), as was a finding of fewer referrals to specialists by rural general practitioners (*11*).

The urban-rural distribution of dentists is even more skewed than that of physicians. In 1962, there were 54.1 dentists per 100,000 population in the United States. Among the 10 most rural States, all but one (Vermont) had a ratio of under 46 per 100,000, while among the 10 most urban States all but one (Texas) had a ratio of 56 dentists per 100,000 or higher. At the extremes, there were 70 dentists per 100,000 population in Massachusetts and 22.5 in South Carolina (*12*). The small town or rural dentist, moreover, tends to have fewer auxiliary personnel (dental hygienists, aids, etc.) than his urban counterpart, so that his productivity per day is lower.

Nurses are extremely important in extending the arm of the physician, especially in hospitals. There are several levels of nurse, varying with their years of training, but the registered nurse (R.N.) is the mainstay of nursing service; she typically supervises vocational nurses or nurses' aids in hospital wards. Rural deficiencies are serious for these health personnel also, although the differentials from urban settings are less severe for physicians or dentists. Registered nurses are mainly employed by hospitals, rather than being engaged in private practice, so that the accelerated hospital construction in rural regions, to be discussed below, has had a greater impact on their rural supply.

Although there is a generally recognized "shortage" of nurses in relation to the expanding demands of modern hospital service, the nurse-population ratio in the United States has steadily improved. In 1950 there were 249 registered nurses per 100,000 population, and this rose to 319 per 100,000 in 1966 (*13*). In rural States the rate of improvement has been even greater than in the more urban States. Mississippi's nurse supply, for example, increased from 74 to 139 per 100,000 between 1949 and 1962—a rise of 88 percent; New York's supply over these same years improved from 297 to 384—a rise of 29 percent (*14*). The overall nurse supply in rural States, nevertheless, tends to remain lower than in urban. Much depends also on geographic region. In the New England States, the supply is high even in rural Vermont, where the 1962 ratio was 429 nurses per 100,000; Texas, on the other hand, with 75 percent of its population urban had a nurse-population ratio of only 170 per 100,000 in that year. Nurses who are married tend to follow their husbands in a choice of location—a factor that further favors settlement in the metropolitan centers.

These bare statistics on the rural-urban distribution of health personnel tell only a part of the story for the rural poor. A relatively low supply of physicians or other paramedical workers in an area means that everyone in the area is handicapped, but the poor suffer the most. If they are Negro they face further discrimination—segregated in separate waiting rooms and generally put at the end of the queue. Even the poor whites in Appalachia or elsewhere face transportation problems in getting to a doctor's office in the town, let alone traveling to a specialist in a distant city.

The training of rural health personnel, moreover, is usually more modest. Specialists in medicine, as mentioned earlier, are heavily concentrated in the main cities, and the more accomplished persons in all professions are usually attracted there. The staffing of rural hospitals must rely more heavily on "practical" or vocational nurses than on fully trained and registered nurses. The rural physician or dentist, moreover, tends to be older and, therefore, less energetic and less likely to keep abreast of new scientific advances. In a solo, as against a shared office, furthermore, he is seldom likely to get away for a postgraduate or refresher course. Studies in rural sections of North Carolina have disclosed the professional mediocrity that unfortunately characterizes the performance of many rural general medical practitioners (*15*).

Hospitals and Other Facilities

Medical care of the most serious or complex illness requires hospital facilities. Twenty-five years ago, the deficiencies in rural hospitals compared with urban were marked. In 1942, when there were 3.5 general hospital beds per 1,000 population in the United States as a whole, the metropolitan counties had 4.7 beds per 1,000 the bordering counties had 2.4, and the nonbordering counties had 2.1 beds per 1,000 population. In the six most urbanized States at that time there were 4.5 general hospital beds per 1,000, while in the eight most rural States there were 2.2 beds per 1,000 (*16*).

The intervening years have brought much improvement in the relative supply of hospitals in rural regions. The national population, of course, has grown a great deal over this quarter century and the overall hospital-bed supply has risen at only a slightly faster rate, so that the national bed-population ratio in general hospitals is now 3.8 per 1,000. Indeed, if only "acceptable" beds under the standards of State hospital-supervising agencies are counted, the national ratio in 1965 was only 3.4 general beds per 1,000 population (*17*). The distribution of these beds among the States, however, is now much more even. This has been largely due to the operations of the Federal-State hospital construction program, launched under the Hill-Burton Act of 1946.

By 1965, new hospital construction, combined with a relatively greater population increase in the urban than the rural States (partly due to the general migration to metropolitan centers), resulted in a greater relative improvement in rural hospital facilities. Between 1948 and 1965, Mississippi, for example, had doubled its general hospital bed supply from 1.5 to 3.2 beds per 1,000, while Massachusetts showed a decline from 3.9 to 3.7 beds per 1,000. Examining the 1965 hospital-bed ratios in sets of 10 States by increasing degrees of rurality, the comparative urban-rural regional bed supply has been nearly equalized, as shown by the following figures (*18*):

Sets of 10 States by percentage rural	*General hospital beds per 1,000 population*
11.4–25.1	3.86
25.5–33.4	3.79
34.3–41.7	4.09
43.2–52.5	3.59
55.5–64.8	3.62

Adequacy of hospital care, however, cannot be measured solely by the number of beds. In general, smaller hospitals are less well staffed with technical personnel and less well equipped, and it is to small-sized hospitals that rural people must usually go. Hospitals in small towns, moreover, seldom have rigorous policies for medical staff organization, so that they are less likely to meet the quality standards of the Joint Commission on Accreditation of Hospitals. In rural Arkansas, for example, only half (39) of the 80 hospitals listed by the American Hospital Association in 1960 were accredited, and in Montana only 27 out of 60 hospitals. By contrast, in urbanized Delaware 13 out of the 16 hospitals were accredited, as were nearly three-quarters (52) of the 71 hospitals in Connecticut (*19*).

Of special significance to the rural poor is the sparsity of organized outpatient departments in smalltown hospitals. For centuries, hospitals in the main cities have offered "free" or very low-cost medical services to ambulatory patients of low income. Partly from the charitable tradition of the hospital and partly to provide teaching resources for medical students and interns, the big-city hospital has long conducted a variety of outpatient clinics for the indigent and medically indigent. Physicians using the hospitals for inpatient care of their private patients have staffed these clinics without remuneration. In smalltown hospitals, however, such organized outpatient departments are seldom found. There may be an "emergency room" where anyone can come without an appointment, but this does not meet the need for regular medical care—especially for chronic ailments—among the poor.

Institutional care of the aged and chronically ill is provided increasingly in nursing homes and related "extended care facilities," as distinguished from general hospitals. These are predominantly small units (mainly under 50-bed capacity) operated by private proprietors, rather than nonprofit agencies. Many of these facilities are simply old converted houses, in which 10 or 20 aged patients are accommodated. Nationally, almost 50 percent of their patients are recipients of public assistance.

The supply of nursing home beds tends to be lowest in States and counties of lowest per capita income, and also where the proportion of the population in the over-65 age group is smallest. Thus, the lowest ratios of nursing-home beds providing "skilled nursing care" (under 0.5 such beds per 1,000) are found in North Carolina, Alaska, Alabama, Arizona, and Georgia. The highest ratios of beds (over 4.0 per 1,000) are found in New Hampshire, Massachusetts, Vermont, and Washington State (*20*). The rural-urban discrepancies in these institutional resources are evident, but they are reflected less in the bed-population ratios than in the types of facilities. The best quality nursing homes are those operated by church groups and other nonprofit agencies; such facilities are typically built on the suburban fringes of the metropolitan centers. In the isolated rural counties, extended care is dependent almost entirely on small proprietary units of the humblest quality.

One important type of health facility is provided mainly by State governments—hospitals for the mentally ill. In each of the four most urbanized States of the nation (New Jersey, Rhode Island, California, and New York) the ratio of mental hospital beds "acceptable" to the State-supervising agency exceeds 3.0 per 1,000 population. In each of the four most rural States (North Dakota, Mississippi, Alaska, and West Virginia), the ratio is lower than 3.0 per 1,000 (*21*). Examining the nation as a whole, however, the relative deficiencies in the more rural States are not so striking. In fact, mental hospitals are often used as a last refuge for senile patients who, because of poor family circumstances, cannot be cared for at home; the low income rural States, therefore, have been relatively energetic in building mental hospitals to cope with this problem. Georgia and Virginia, for example, operate higher ratios of mental hospital beds than Connecticut and Massachusetts.

The deficiencies in this sector are reflected mainly in the staffing of mental hospitals. Everywhere in the nation, they are understaffed and under-equipped, but especially in the lower income rural States. Senile and other psychotic patients from rural areas must usually go to seriously substandard facilities. This is a special misfortune for the rural poor, since everywhere mentally disturbed patients of lower social classes are more likely to be handled through institutionalization than persons with the same diagnosis of higher social rank (*22*).

Thus, in summary, the total health facilities in rural regions, while they have improved over the last quarter century, are still somewhat lower in quantity than those serving large city populations. Their qualitative deficiencies are more serious. Of course, rural patients may and do travel to distant cities for hospital care, but this is done mainly by those of moderate or high income. The financial means and the medical sophistication required to obtain medical or surgical attention in a distant city hospital are seldom found among the rural poor. It is for this reason that efforts have been made to develop networks of related hospitals in large geographic regions, a subject to be discussed later in this report.

Health Services Received

With these deficiencies in health personnel and facilities serving rural populations, it is to be expected that the volume of services they receive would be lower than that for city dwellers. This is especially true for the rural poor, in spite of their higher burden of sickness and disability.

Medical care is obtained through private purchase, voluntary insurance, and governmental or charitable sources. In 1961, the average urban family spent $355 for all medical services—a figure which included $91 in health insurance premiums. Rural farm families, which were on the average larger, spent in that year $310 (*23*). Support for medical services by way of government, as we shall see, is also lower in rural areas.

The best measure of the day-to-day medical care people receive is the rate of contact with physicians or dentists per person per year. These contacts may take place in the doctor's office, the patient's home or in an organized clinic, but the great majority take place in an office. The basic findings for 1963–64 are shown in table 3. For both sexes the rate of contact with physicians and dentists is appreciably lower in the nonmetropolitan areas, farm and nonfarm. Other tabulations show that this holds for each age group, but the differential is particularly great for the very young. Differences are also greater at the lower income levels.

TABLE 3.—*Medical and dental services by place of residence, 1963–64*

Contact per person per year	Standard Metropolitan Statistical Areas (SMSA)	Outside SMSA's	
		Nonfarm	Farm
Physician visits:			
Males	4.2	3.7	3.0
Females	5.4	4.8	3.7
Dental visits:			
Males	1.7	1.0	0.9
Females	2.0	1.4	1.0

Source: U.S. National Health Survey, reported in U.S. Department of Commerce, *Statistical Abstract of the United States 1966*, Washington, p. 66.

Hospitalization presents a different urban-rural comparison. Hospital care, more than ambulatory health care, has been supported by public funds, such as in the programs of welfare departments, the Veterans' Administration, or the Indian Health Service. Inadequacies in physician's care of the ambulatory patient, moreover, often result in an illness becoming aggravated, so that hospital admission becomes urgent. Furthermore, doctors in rural districts, who are hard-pressed for time, cope with the pressures by hospitalizing patients more readily—sometimes for conditions which could ordinarily be treated in the patient's home or the doctor's office. As a result of all these factors, the volume of hospitalization received by rural people is not lower than that received by metropolitan area residents, except if they are actually farm families. The basic findings of the National Health Survey for the 2-year period July 1963 to June 1965 were as follows (*24*): ·

Type of area	Hospital discharge per 1,000 per year	Average length of stay (days)	Hospital days per 1,000 per year
SMSA's	122.2	8.8	1,075
Outside SMSA's:			
Nonfarm	145.0	7.6	1,102
Farm	111.7	6.8	760

If the net measure of hospital days per 1,000 persons per year is used, the overall rate of service to nonmetropolitan populations is lower than that to the residents of cities and their environs (these measures are, of course, by the person's place of residence rather than by place of hospitalization). In fact, in 1959, when the National Health Survey analyzed its data according to the older form of rural-urban breakdown, the aggregate days of hospitalization per 1,000 persons per year were:

Urban	901.6
Rural nonfarm	800.0
Rural farm	704.7

As one can gather from the previous sections on medical personnel and facilities, the type of physician's care received by a country dweller is more likely to be that of a general practitioner than a specialist. In the drugstore, he is more likely to purchase a self-selected or patent remedy, as distinguished from a prescribed medication. In the dental chair, he is more likely to have extractions of neglected teeth than fillings or other services to preserve the teeth.

The lower level of education of rural people, especially the poor, means that they are less likely to observe principles of hygienic living, aside from the physical handicaps of poverty. They are less likely to obtain preventive immunizations, to have prenatal care during pregnancy, to eat a nutritionally balanced diet, and to obtain periodic health examinations for early disease detection. In the poorest rural families, who suffer discrimination on racial or ethnic grounds, a certain fatalism and despondency may develop so that medical attention is sought only when health problems become desperate.

Public Health Programs

The previous pages have summarized the health status of rural people, the general resources in personnel and facilities available to them, and the medical services they receive—primarily in the "open market." There are many organized health programs in America, however, designed to protect the health of populations and to make medical care more accessible to them. The extent and character of these programs in rural areas must be examined—starting with the activities of public health agencies.

Historically, public health departments, like hospitals, were born in the largest cities; it was not until 1911 that a local public health agency was organized by a county government, with specific orientation to a rural population. Since then, about 80 percent of the 3,071 counties in the United States have come to be served by organized health departments with full-time health officers (*25*). In many sparsely settled regions, however, a "health district" composed of several adjoining counties is the jurisdictional unit.

The traditional services of public health agencies include supervision of environmental sanitation, control of communicable diseases (isolation of cases, immunizations, etc.), promotion of maternal and child health, and health education. As tools for these objectives, the departments collect vital statistics, operate laboratories, and conduct clinics. In the last 25 years, some health departments have broadened the range of their activities to include such programs as dental service for children, accident prevention, operation of treatment programs for crippled children, promotion of mental health, early detection of chronic noncommunicable disease (like cancer or diabetes), and sometimes the administration of public hospitals.

These wider ranging public health programs, however, are usually conducted by agencies based in the larger cities. Rural county or district health departments tend to carry out relatively narrow programs. Aside from the conservatism of rural county governments, the staffing of county departments is usually so frugal that there is little time for innovations. The same applies to most State health departments in the more heavily rural States. In such States, the public health agency is often dominated by the State medical society, which tends to inhibit extension of governmental programs. Many of the rural county health departments, moreover, are directed by semiretired doctors, who are seeking an easier life and are not inclined to move out and blaze new trails for public health improvement. It is common, moreover, for the health officer position to remain vacant for months or years, when a former director has left or died. In Arkansas, for example, 21 of the 27 local health units were without a full-time health officer in 1964, as were 83 of the 121 units in Kentucky. California on the other hand, had such medical vacancies in only 2 of its 61 local health units and New York in only 3 of its 42 units.

A good indicator of the adequacy of public health services is the ratio of public health nurses to population in a State. The public health nurse is involved in most of the clinic programs (child health services, venereal disease, tuberculosis, dental care, etc.), she visits families at home, gives immunizations in schools, offers health education, and generally acts as the foot soldier of the public health army. In table 4, computation has been done of the ratio of public health nurses to population in sets of 10 States ranked in sequential order of their rurality; it is evident that in the more rural States the ratios are consistently poorest.

Table 4.—*Public health nurses in States ranked by order of rurality, 1964*

Sets of 10 States by percentage rural	Population	Public health nurses	Public health nurses per 100,000
11.4–25.1	75,427,000	16,441	21.4
25.5–33.4	50,821,000	8,827	17.4
34.3–41.7	24,940,000	3,563	14.3
43.2–52.5	23,091,000	2,981	12.9
55.5–64.8	18,735,000	2,217	11.7

Source: Derived from American Nurses Association, *Facts About Nursing 1966*, New York, p. 28.

Nevertheless, the operation of public health agencies in any State tends to offer special benefits for the lower income groups. In the rural South, where private health services are beyond the reach of many Negro families, public health clinics help to meet certain needs. Prenatal visits to public health clinics, for example, may be correlated with the births occurring in a State; in 1965, such visits were made by mothers in Mississippi at the rate of 186 per 1,000 births and at the rate of 163 per 1,000 births in North Carolina. In urbanized New York, the rate that year was only 21 per 1,000 births and in Pennsylvania 24 per 1,000 (*26*). Most pregnant women in the latter States are doubtless given prenatal care by private physician, so that the total rate of prenatal services from all sources is almost certainly higher there. But the impact of public health agency services in rural States is obviously helpful in the face of inadequacies through the private sector for the low income population.

Welfare Medical Services

Another important health program specifically focused on the needs of the poor is the system of welfare agency services which include certain types of medical care. Some of these services are given in municipal or county hospitals operated directly by government, other services are purchased by the welfare client with his cash allotment, and still others are obtained through so-called vendor payments by the welfare department to private doctors or hospitals that render care to the indigent person. An elaborate set of "categories," moreover, define persons whose financial aid and medical care are supported largely by Federal grants to the States—mainly the aged poor, the poor families with "dependent children" (due to lack of a breadwinner), and the indigent blind or totally disabled. Other indigent persons requiring medical care must depend entirely on State or local funds for "general assistance."

In general, the proportion of persons receiving some form of public assistance is higher in the low income States with greater percentages of rural population. This is especially true for old-age assistance; in Georgia, for example, 28.7 percent of all persons over 65 years of age received such assistance in 1965, while in New Jersey it was only 2.2 percent of such persons. This is partly due to the greater extent of poverty in the more rural States and partly to the lesser coverage in those States of the Federal old-age insurance program (commonly known as social security).

The financial as well as the medical benefits per indigent person, however, tend to be decidedly lower in the more rural States. In the program for aid to families with dependent children (AFDC), for example, the expenditures for vendor payment for medical care in the month of December 1965 were $4.84 per recipient in New York, $7.81 in Connecticut, and $6.42 in Hawaii (which is 76 percent urban). By contrast, the vendor medical payments per AFDC recipient that month were $2.53 in North Carolina, $1.35 in Maine, and $1.39 in Virginia. Moreover, in several rural States, like South Dakota and Mississippi, there was no vendor payment program at all for AFDC families, whose medical care had to be financed entirely from their cash allowances or obtained through the charity of doctors or hospitals (*27*). A comparable differential applies to the aged poor who may obtain medical care either through the program of old-age assistance (OAA) or the special programs enacted in 1960 on medical assistance for the aged (MAA).

As mentioned earlier, outpatient clinics of hospitals are less accessible to rural people of low income than to the urban poor. Yet the poor who do not fit under one of the federally aided categories (for example, a nondisabled man under 65 years of age) cannot ordinarily get welfare support for care from a private physician; he must either impose on the kindness of the doctor or seek local "general assistance," which is seldom available for medical expenses outside the hospital. Although there is much talk of the "medically indigent" (i.e., those who cannot afford medical costs, although not poor enough to be eligible for public assistance), no significant governmental assistance was available for such persons before the MAA program of 1960 and the Social Security Amendments of 1965 known as Medicare.

Under Medicare, title XIX, there will doubtless be improvement in the support of medical service for the rural poor, although much will still depend on the ability and willingness of State governments to put up money which can be matched by Federal grants. Prospects under this new law are considered below. Until now, the rar [illegible] f welfare medical benefits for the rural poor [illegible] been meager—limited largely to hospitalization of emergencies or severe diseases.

Voluntary Health Insurance

For those who are self-supporting, a major device for facilitating medical care is health insurance. Through pooled periodic payments into a fund, individuals and families gain protection against the cost of hospital or medical services, so that access to those services is greatly enhanced. There is abundant evidence that persons with health insurance receive greater volumes of medical care—at all family income levels—than those without (*28*).

In this sphere too, however, the rural population suffers a disadvantage, especially the rural poor. Hospitalization insurance is the most extensive form of health cost protection carried in the United States. At the end of 1965, about 80 percent of the civilian population had such coverage (*29*). The enrollment of rural people, compared with urban, is appreciably lower, and the differential is even greater with respect to insurance for physicians' care. Comparative data are available for 1962-63 and are shown in table 5. At this time the national coverage of hospitalization insurance was 70.3 percent, according to the U.S. National Health Survey, while it is evident that among the rural poor (under $4,000 family income)—both farm and nonfarm—it was less than 50 percent.

TABLE 5.—*Health insurance coverage: Percentage of the rural and urban population protected by hospitalization insurance, 1962-63*

Family income	Urban	Rural nonfarm	Rural farm
$7,000 and over	88.8	85.3	71.2
$4,000-$6,999	81.4	75.1	65.3
Under $4,000	47.6	41.6	37.4
All incomes	74.5	63.8	50.8

Source: U.S. Public Health Service, *Vital and Health Statistics: Health Insurance Coverage July, 1962—June, 1963*. Washington, 1964, p. 9.

The explanation of this rural handicap is not difficult. Aside from lower incomes, which in both urban and rural sections mean less insurance coverage, rural populations are less readily enrolled in health insurance plans for administrative reasons. The great bulk of insurance enrollment is done through organized groups of people—mainly the employees in a firm or other place of work. Larger groupings are more easily enrolled than small ones. In small towns and agricultural regions, however, it is obvious that such organized groupings of people are both fewer and smaller.

Among rural nonfarm people, mineworkers and their families have achieved fairly good health insurance coverage, largely through the collective bargaining of their labor unions. The welfare and retirement fund of the United Mine Workers of America has provided insured hospital and specialist services, with careful quality surveillance, to several hundred thousand miners and their dependents since 1948 (*30*). The farm organizations in some areas—including the Farmer's Union, the Farm Bureau, and the Grange—have also achieved the benefits of group enrollment of their memberships.

Many of the lowest income people in rural areas, however, are not attached to mining employment, to farm organizations, or to other organized groupings. Their isolated status not only presents greater obstacles to health insurance enrollment in voluntary plans, but also deprives them of the financial advantage of premium-sharing by an employer. In most industrial populations, the latter "fringe benefits" have been achieved over the years in labor-management negotiations.

Another result of isolation is the necessity of rural people, who do seek health insurance coverage, to depend on those policies that are sold specifically for individuals, as distinguished from groups. Because of actuarial considerations in the insurance business, high sales costs, and profit incentives, individual health insurance policies tend to cost more and give less. Their premiums are higher and their benefits are more restricted than those of group insurance policies. In fact, such individual enrollee policies are sold mainly by the commercial carriers, among which the cost-benefit ratio (i.e., the percentage of premiums paid out in benefits) is generally poorer (*31*).

The great predominance of commercial health insurance coverage in rural populations is reflected by data from the separate States. In 1962 (when about 70 percent of the national population had hospitalization insurance), the overall distribution among the three main forms of insurance organization was as follows (*32*).

Type of carrier	*Percentage of enrollment*
Commercial companies	56.1
Blue Cross-Blue Shield	39.3
Other "independent" plans	4.6
All carriers	100.0

In the more urbanized States, the "Blue" and the "independent" plans tend to have greater proportionate enrollment, while in the more rural States the commercial companies tend to have an even greater share of the total enrollment pie. Thus, in heavily urbanized States like New Jersey, Rhode Island, New York, Massachusetts, Hawaii, Utah, Colorado, Ohio, and Pennsylvania, the commercial share of health insurance coverage is under 50 percent. It is over 60 percent, however, in more heavily rural States like North Dakota, Mississippi, Alaska, West Virginia, Vermont, South Dakota, North and South Carolina, Arkansas, Idaho, Montana, Nebraska, and others.

One of the more promising developments in the health insurance field in the establishment of plans providing more comprehensive benefits than the large commercial or "Blue" entities. The health services offered under these latter organizations are mainly confined to hospitalization and physician's care in hospitalized illness; comprehensive doctor's care in the home and office (or clinic) as well as the hospital is only meagerly provided. Moreover, the benefits for even hospital-based services are predominantly on an indemnification basis, with the patient usually being obligated to pay a balance of charges beyond the limit of the indemnity allowance. By contrast, a small but important share of the national population—about 4 percent—is enrolled in health insurance plans, usually sponsored by consumers or industrial firms, which offer comprehensive medical and hospital services. Most of these people are in plans that have physicians organized in group-practice clinics.

The largest of these comprehensive prepaid medical care plans are in New York (Health Insurance Plan of Greater New York) and California (Kaiser Foundation Health Plan), and they cover essentially urban populations. In those two States, enrollment in comprehensive insurance plans reaches nearly 8 percent of the population (*33*). There are certain rural regions, however, where this type of plan has shown vitality, even though the percentage of population reached is still very small. One of the earliest was the Farmer's Union Hospital Association with its prepaid community clinic, started at Elk City, Okla., in 1929. In rural sections of Texas, Arkansas, South Dakota, Alabama, Kansas, Minnesota, Missouri, Oregon, and Washington, somewhat similar health plans are operating. Their importance is to be measured less in terms of the numbers of rural people enrolled, which are still small, than in their demonstration of sound medical service patterns which may suggest blueprints for the future.

The voluntary health insurance movement in America has made great progress, against much early opposition, in enabling people to get needed medical care. Its value has been not only in lightening financial loads on families, but also in laying foundations for improvement in the quality of professional care. There is still a long way to go, however, before health insurance protection achieves its full potential of both population coverage and scope of medical benefits. Its impact so far has been less among rural than among urban people, and the very least among the rural poor. An important step forward in helping low income people, both rural and urban, was taken by the health insurance amendments to the Social Security Act of 1965, and they are reviewed in the next section.

The Medicare Law

The provisions of the Medicare amendments to the Social Security Act of 1965 are too well known to review here, but their relative impact on rural people may be considered. First of all, with its focus on the health care of the aged 65 years and over, the benefits must be somewhat less for rural residents, since they have a smaller proportion of aged persons and a larger proportion of children. The national urban population (1959) has 9.3 percent of aged persons, compared with 8.0 percent in the rural population.

Secondly, there is the problem of rural enrollment. The benefits of title XVIII on health insurance of the aged include part A for hospital and related services and part B for physician's care and other special services. Part A benefits are automatically available to virtually every senior person in the nation, but part B benefits require voluntary enrollment by the individual, with payment of a share of the premium costs ($3 per month in 1967). By January 1967, some 93 percent of all aged persons in the United States had voluntarily enrolled in part B and were therefore entitled to insurance for a fairly wide range of physician's services and certain other benefits (*34*).

Among rural aged persons, however, the enrollment for part B benefits was clearly lower than the national average. Among the 10 most urban States, all 10 aged populations were enrolled in the part B program at a rate higher than the 93 percent national average; among the 10 most rural States, only 3 of the aged populations had enrolled at a rate exceeding the average. For example, in the two most urban States (New Jersey and Rhode Island) the enrollment was 96 and 95 percent, while in the two most rural States (North Dakota and Mississippi) it was 92 and 85 percent, respectively. These apparently small differences—due probably to difficulties in communication with isolated and poorly educated aged persons in rural areas—may make a large difference in the medical care to be received by these noninsured persons.

A third problem in the rural operations of Medicare relates to the Civil Rights law, which requires that participating hospitals and "extended care facilities" must practice no policy of racial segregation in rendering services. About 95 percent of the licensed general hospitals in the nation have complied with these requirements, but those that have not are concentrated in the rural States of the South; many aged persons in those States, therefore—both Negro and white—are being denied access to facilities for hospital care to which they are legally entitled.

There are other deficiencies in the Medicare law which are bound to strike the rural aged harder than the urban. Various deductibles and cost-sharing requirements naturally create greater obstacles for the impoverished aged persons found more frequently in rural areas. The practical availability of all the benefits, moreover, depends on the supply of medical and related personnel which we know is lower in rural districts.

In spite of these weaker benefits, there can be no doubt that the social insurance principle in Medicare title XVIII has been a boon to the rural aged, and constitutes a long step forward for medical care. This new law has corrected many of the deficiencies of voluntary health insurance in rural and urban areas alike.

Another feature of the Medicare amendments is the provision for improved services for the indigent, old and young, legislated under title XIX. As reviewed earlier, these are largely limited to certain categories among the poor, but the new law permits Federal matching of State funds for "medically indigent" persons of the same demographic characteristics, even if they are not receiving cash assistance. This will doubtless be of special value for low income rural people who are "categorically linked"—particularly the children in families with a missing breadwinner. By 1975, moreover, the Medicare law requires that *all* medically indigent persons in a State, even if not categorically linked, must be eligible for some medical assistance if the State is to receive Federal support for any of its poor residents.

It is still necessary, however, for the States to put up approximately half the cost of this medical care for the poor; and the economic potential in the rural States remains lower. The law's requirement of a greater share of financing from the State, as against local, governments is, it is true, a special advantage for the residents of rural counties within any type of State. As of January 1967, however, 23 of the 50 States had not yet implemented the title XIX program; of these 23, 16 were in the most rural half and only 7 in the most urban half of the nation's 50 States (*35*). There is much leeway left, moreover, on the scope of health services which a State may provide for its welfare beneficiaries. Hospital, nursing home, and physician's services are mandatory, but dental care, physical therapy, and drugs are optional, and these may be expensive items. There is every likelihood that this range of services for title XIX beneficiaries will be narrower in the more rural States, and the criteria for eligibility of the medically indigent will be more rigid.

The Medicare law, nevertheless, constitutes a solid step forward in medical services for both the rural and urban poor, by reason of both titles XVIII and XIX. Amendments in the coming years may well improve its provisions further.

Migrant Family and Other Special Rural Programs

For certain sectors of the rural population, special programs of health service have been organized, and these must be examined briefly. Of principal current importance are migrant agricultural families, American Indians, and residents of the Appalachian region.

In the 1930's and early 1940's, when the nation was plunged into a massive economic depression, the rural areas were hit especially hard and numerous assistance programs were developed under the U.S. Department of Agriculture. Perhaps the most imaginative was that of the Farm Security Administration (FSA), which had many facets, including special health service programs for low income farm families and migratory farmworkers. At their peak in 1942, special federally subsidized prepaid medical care plans for FSA borrowers reached over 600,000 persons in 1,100 rural counties. In addition, about 150,000 persons in migratory families were served by special clinics or health centers established at 250 locations of seasonal labor concentration (*36*). This terse summary cannot possibly convey the boundless work, ingenuity, and dedication that went into the development and operations of these remarkable rural medical care programs.

With the end of World War II, there was a retrenchment in Federal assistance programs of the U.S. Department of Agriculture and a return of responsibilities to the States and counties. In most States, governmental agencies did not take up the challenge in the field of health services, so that these publicly supported programs were, in effect, abandoned. The health needs of low income farm families and migratory agricultural workers were left to be met by the traditional local welfare programs or through the private sector. Experiences of the Farm Security Administration and related pioneering rural health programs, however, left their mark on the nation, especially in a heightened appreciation of the special problems of rural medical service. Enrollment of farm people in Blue Cross plans through their farm organizations, founding of some voluntary rural medical cooperatives, strengthening of rural county health departments, and the whole concept of hospital regionalization under the Hill-Burton Act were among the long-term benefits.

Health services for migratory agricultural families remained an especially vexing issue, since—being nonresident in most of the areas where they do seasonal work—these low income people have usually been ineligible for medical assistance from the local welfare department or local public hospitals. The plight of these unfortunate adults and children—immortalized in John Steinbeck's *Grapes of Wrath* (1939)—is rediscovered, it would seem, every 20 years or so. In 1962, therefore, there was enacted the Federal Migrant Health Act (P.L. 87-692), which reestablished Federal assistance for health services to migrant workers and their dependents. Instead of a direct Federal operation, however, this program authorizes grants by the U.S. Public Health Service to State and local agencies (mainly health departments) for services to migrant families.

The 1962 law emphasizes grants for "family health service clinics"—a politically palatable identification for general ambulatory medical care, as distinguished from the restrictive preventive services conventionally offered by rural county health departments. By 1965, grants had been made to 60 local projects for such broad-gaged clinics and for other purposes (like health education, sanitation, or public health nursing) in 29 States and Puerto Rico (*37*). Undoubtedly these projects improved the health care of several thousand migrant families, among the estimated 2,000,000 such persons in the nation.

The total appropriation for these migrant health grants in 1965, however, was only $3 million. A study of the problem by the American Public Health Association suggested that an "average" level of medical service for these families would cost over $100 million per year (*38*). Exact accounting of financial needs, in relation to private resources for health care, is extremely difficult to make, but it is evident that by almost any criterion this program's impact must be small. The drop in the bucket that it offers is less important than its value in keeping alive social concern for the migrant family, whose health problems require more basic rural actions to solve.

Another distinct rural population for which government has taken substantial responsibility is that of the American Indian. Of the 552,000 Indians counted in the 1960 census, about 380,000 are entitled to health services from a special network of hospitals and health centers operated by the Division of Indian Health of the U.S. Public Health Service. These are predominantly rural people, of low income, concentrated on Indian reservations in 23 States. The largest numbers are in Oklahoma, New Mexico, and Arizona (*39*).

With origins going back to War Department treaties with Indian tribes in the early 19th century, the Indian health service program was operated by the U.S. Department of the Interior from 1849 to 1955, and since then by the U.S. Public Health Service. Today there are 47 general hospitals and 3 tuberculosis sanatoriums (from 14 to 400 beds) earmarked for these rural people. There are about 300 field health stations attended by doctors or nurses and, in areas of sparse Indian settlement, there are contractual arrangements for services from some 200 other local hospitals, 400 private physicians or dentists, and 18 State and local health departments. A reflection of this program's amplitude is its expenditure for health service in 1964 of almost $138 per capita, an amount only slightly lower than the per capita health expenditure of the entire U.S. population.

The outstanding feature of the Indian health service is its comprehensiveness, combining all the usual preventive services and a full range of ambulatory and institutional services for treatment. No other population group outside of the active military forces receives such wide benefits at Federal Government expense. As a result, the record of health improvement among Indians in recent decades is impressive, in spite of seriously impoverished living conditions. Their life expectancy increased by 11 years between 1940 and 1962, although it is still 8 years below that of the average American. It is interesting to observe the daringly "socialized" patterns by which health services have been organized for this special social minority, in contrast to larger sectors of the rural poor in America.

A third group among the rural poor for whom government has taken special action are the residents of the Appalachian mountain region. In 1965, the Federal Appalachian Regional Development Act (P.L. 89–4) was passed to help improve the conditions of life for low income rural people in Kentucky, Tennessee, West Virginia, and western sections of Virginia and North Carolina. This program included $21 million for grants to build and equip hospitals, diagnostic and treatment centers (i.e., units for ambulatory patients), and other health facilities in this region (*40*). Along with this construction subsidy has gone technical consultation from the U.S. Public Health Service to help improve the basic public health and hospital services available to these mountain people.

There are other governmental health programs serving selected rural populations, like the families of personnel working for the Tennessee Valley Authority or residents of the Virgin Islands and U.S. trust territories in the Pacific Ocean. Altogether, however, these, along with the three special programs described above, reach only a small proporion of the rural poor in the nation.

Further Governmental Health Programs

A variety of other governmental health programs for certain demographic groups or special diseases operate throughout the United States and have some impact on the rural poor.

School children everywhere have the benefit of limited health protection, including physical examinations and first aid, as well as health education in the classroom. Immunizations are sometimes given, and occasionally treatment for common disorders like dental cavities and visual problems in low income youngsters. In the larger schools of the great cities, these services are often well developed, with full-time nurses on the premises, consulting psychologists, and periodic visits from physicians. Schools in rural districts, on the other hand, seldom have strong health programs. The isolated one-room country school house, of course, has handicaps in many spheres, but even in the larger schools of rural trade centers, the health programs tend to be weak. Instead of full-time school nurses, public health nurses from the health department, with many other duties, must cover the schools as well. Physicians are usually in too short supply to permit regular examinations of the children for detection of physical or mental defects.

Industrial establishments have also long provided special health protection and services and safety promotion programs for their workers. Large firms often have well-developed in-plant medical services, with full-time nurses, physicians, safety engineers, industrial hygienists, and others. Some of the earliest programs of prepaid medical care did, indeed, have their origins in isolated rural enterprises like mining, lumbering, and railroads (*41*).

Most rural workers, however, do not have the benefit of good occupational health services. In smaller towns, factories tend to have smaller work forces, and in-plant services are poorly developed. In the mines, protective health and safety legislation is in effect, but the rate of serious injuries and fatal accidents is still high. Numerous small mines and lumbering operations have no organized medical or safety programs. In agriculture, of course, the majority of working people—whether self-employed farmers, tenants, or farmworkers—are engaged in small enterprises without any occupational health programs. Even the large "agri-business" farms or ranches seldom maintain the systematic health services found in urban factories with comparable numbers of employees. In such enterprises, accident rates are often high, and a problem of serious concern in recent years has been the hazard to fieldworkers possible from improper use of pesticides (*42*).

The workmen's compensation laws on industrial injuries, which provide for disability cash payments and the costs of medical care, tend to be less comprehensive in the rural States. Self-employed farmers or tenants are not covered at all, and even agricultural employment is exempted from coverage under most State laws or left to the voluntary decision of the farm operator (*43*).

Governmental medical care programs for special population groups under *Federal* auspices are more equitable for rural people. Veterans with service-connected disabilities, wherever they may live, are entitled to first-class comprehensive medical care from the facilities of the U.S. Veterans' Administration. Even for nonservice-connected conditions, they may get hospital care in any of 175 V.A. institutions, if the veteran states that private care would be a financial hardship. Since this is usually true of the low income veteran from a rural area, this Federal program has particular value (*44*). The same sort of rural benefit applies to the dependents of military personnel on active duty. Since 1956 these wives and children have been entitled to payment of most expenses for general medical care by the U.S. Department of Defense.

Among special diseases for which government assumes the major financial responsibility, mental disorder is the most important. Mental hospitals are nearly always a State government responsibility, and their quantity and quality in different States were discussed above. The modern approach to mental illness, however, is to attempt to treat emotional problems early so as to prevent the need for hospitalization. To facilitate this, a network of psychiatric clinics has been growing up around the nation, financed largely by grants from the Federal and State governments.

The establishment and capacities of these mental health clinics are much weaker in the rural States. Psychiatrists are very heavily concentrated in the largest metropolitan centers (New York, Chicago, Los Angeles, etc.) and leadership in the small towns is usually lacking. Rural Arkansas, for example, has only 4 such psychiatric clinics, while urbanized Colorado with almost exactly the same State population (1,969,000) has 28 of them. Urban Connecticut has 50 such clinics, while rural Iowa with just a slightly smaller population (2,760,000) has only 22 of them (*45*). Perhaps the prevalence of mental disease is lower among more rural populations, but it is just as likely that the recognition of these problems is obscured by the nonavailability of resources for their diagnosis and treatment.

Crippling conditions in children is another category of disorder that government has tackled. The U.S. Children's Bureau in the Department of Health, Education, and Welfare gives grants to the States, to help pay for the costs of medical care of children identified as "crippled" and financially eligible for this aid. These definitions are flexible, and the rural States actually derive relatively greater benefits from this program than the urban. In 1964, the crippled children's program served 5.1 children per 1,000 persons under 21 years of age in the nation. Among the 20 most urban States, this average rate was exceeded in 8, while among the 20 most rural States it was exceeded in 17 (*46*). This special advantage for rural populations is not accidental, but has been deliberately written into the Federal grant formula which favors areas of greater poverty.

Disabled adults who are employable may be helped to get corrective medical care, as well as job training, by the Federal grant-in-aid program of the Vocational Rehabilitation Administration (VRA). Eligibility, both medical and financial, is also flexible in this program, so that States with lower per capita incomes and lesser private resources tend to take greater advantage of it. Nationally the vocational rehabilitation program helped 51 persons per 100,000 in 1961—not a very large proportion. Among the 20 most rural States, however, this rate was exceeded in 12, while in the 20 most urban States it was exceeded only in 5. The greatest impact of the VRA program was in West Virginia (188 cases per 100,000), Georgia (152 cases), and Arkansas (138 cases), while the smallest relative impact was in California (16 cases per 100,000), Ohio (21 cases), and New Jersey (28 cases) (*47*).

Modern rehabilitation of disabled persons requires a combination of skills in physical medicine, surgery, vocational training, job counseling and placement, social casework, and other disciplines. Rehabilitation centers which offer these varied skills under one roof are not plentiful (there are only about 150 of them in the United States), and they are naturally located in the larger cities. The governmental programs for children and adults just described usually arrange transportation of patients to these centers, not only covering travel costs but making the various professional and administrative liaisons required. Low income rural people who are reached by these programs, therefore, may be greatly benefited, but those who must rely on their own private resources can seldom profit from the comprehensive rehabilitation centers in the metropolitan cities.

Voluntary Health Agencies

Complementing and often antedating governmental health programs are a great diversity of voluntary agencies with specific objectives for health service. Voluntary health insurance plans have been discussed, as have been the health activities of private industry; by contrast, the "voluntary health agency" does not have an earmarked population to cover. It is typically supported by charitable donations, and the benefits go to various and sundry persons in need of them.

There are thousands of voluntary health agencies in the United States, the best known of which conduct campaigns on specific diseases like cancer, blindness, or cerebral palsy. Typically they devote their funds to a combination of support for scientific research, education of the health professions, and direct service to patients. The large voluntary organizations consist of a network of local chapters, State offices, and national headquarters which match governmental hierarchies in their complexity. In addition, there are many voluntary health agencies with purely local roots, directing their efforts to the solution of some unique local problem. It has been estimated that no less than 100,000 local voluntary units of both types are operating in the United States for various purposes (*48*). Although the programs of these agencies do not compare in magnitude with those of government, and there is evidence of much waste due to fragmentation and high administrative overheads, nevertheless they help to meet certain health needs not served by government and they often pioneer new ideas.

As for other organized social efforts, however, the impact of the vountary health agencies is typically lower in the rural areas. The sources of private charity are much greater in the cities, and health activities are largely carried out in the communities where the money is raised. Data from the American Heart Association—the voluntary health agency tackling the nation's top cause of death—reflect the general tendency. This agency has chapters in every State and it spends money in every State. In the fiscal year ending June 30, 1966, it spent over $21 million or slightly over 10 cents per capita for the national population. This average of 10 cents, however, was exceeded in 8 of the 10 most urban States but in only 2 of the 10 most rural States (*49*). A similar computation of 1966 expenditures by the American Cancer Society showed outlays of over 20 cents per capita in 13 out of the 25 most urban States, compared with only 4 out of the 25 most rural States (*50*). Comparable relationships would undoubtedly be found for most of the other disease-specific voluntary agencies.

Some of the most important voluntary health agencies are virtually restricted to the large cities. Visiting nurse associations give bedside care to patients at home—usually the chronically ill of low income—but seldom do they serve rural populations. One striking exception is the Frontier Nursing Service of Kentucky, a philanthropically supported program in which nurses go by jeep or horseback to serve isolated families in the backwoods. There are also some church missions providing small hospitals and general medical care for impoverished rural populations in New Mexico, Tennessee, and elsewhere. Other large agencies with national networks, however, like Alcoholics Anonymous, the Salvation Army, or the Planned Parenthood Association, are essentially confined to the cities.

This is not to suggest that small towns and villages lack community spirit for health purposes. Women's home demonstration clubs, parent-teacher associations, church auxiliaries, and other such groups are numerous and active, and their programs may include some concern for issues like improved nutrition or safety on the school grounds. The purposes of such rurally based organizations, however, are mainly educational, and they have little impact on the medical needs of the rural poor.

Attracting Doctors and Others to Rural Areas

The preceding pages have summarized the principal organized programs which help to meet the health needs of populations. Most of these programs are nationwide, with differential impacts on rural, compared with urban, people; some are specifically oriented to rural districts and to the poor within them. Underlying all these programs, however, is a need for health personnel and medical facilities to actually render the needed services. As we noted at the outset, these resources are in leaner supply and nearly always of poorer quality in the rural than in the urban areas. We must now examine, therefore, certain other general movements which are designed mainly to improve these basic human and material resources in rural areas.

Efforts to improve the rural supply of physicians have taken many forms. Basic is the output of doctors by the medical schools, since the overall national production of doctors naturally influences the number who will settle in rural areas. The net output of physicians by medical schools throughout the nation, however, has barely kept up with the growth of population over the last 30 years (*51*).

Indeed, were it not for the inflow of medical graduates of foreign medical schools in recent years, the net ratio would have markedly declined. Nevertheless, since the end of World War II there has been an increase from 77 to 88 medical schools in the United States—nearly all of the new ones being established by State governments. As of late 1966, moreover, 16 more medical schools were in the process of development (*52*). Enrollments in the existing schools have also been increased, although only slightly.

The principal growth of new medical schools in the last 20 years has been in the more rural States, like Kentucky, West Virginia, and New Mexico. These State-sponsored schools give preference to admission of native sons who, it may be expected, are more likely to settle in their home territory. Furthermore, an internship or residency at a university medical center often leads a young physician to start practice nearby, even if he comes originally from another State. Thus, the establishment of new medical schools and teaching hospitals in the principal cities of rural regions is an important force for improving the supply of rural doctors in the long run. Federal grants to the universities for medical research, and more recently for medical school facility construction, have helped to foster this development.

Another approach to the problem of attracting doctors to rural areas has been the construction of modern office facilities. For many years, small towns on their own have offered physicians rent-free office quarters or even low-cost homes to induce them to come (*53*). In 1953, the Tennessee State Medical Association set up a "medical foundation" devoted to helping rural communities attract young doctors through advice on building private clinics and other means (*54*). Since 1959, the Sears Roebuck Foundation has put money in back of this idea and conducted a systematic program of assisting small towns to build efficient private medical clinics, with capital loans and architectural plans. In 1966, 20 towns were so aided (*55*). The American Medical Association has collaborated in this program, offering an information service to new medical graduates on towns and villages lacking a doctor; since 1948 the AMA has held a series of national conferences on rural health, publicizing this and other approaches to the problem. In early 1967, Senator Tydings introduced in the U.S. Congress a Rural Community Medical Clinic Loan Act which would put the Sears Roebuck idea on a firm governmental basis; it would provide $10 million in loans to rural communities of 500 to 5,000 population for constructing clinic buildings to accommodate two or more private physicians. Amendments to the Health Professions' Educational Assistance Act in 1966, moreover, authorized forgiveness of educational loans up to 100 percent for physicians, dentists, and optometrists who set up practice in low income rural areas.

Other steps have been taken by State governments to induce settlement of young physicians in rural localities. During and after World War II, several Southern States enacted statutes to provide full fellowship support for medical students who, on completion of their training, would set up practice in a rural community. The fellowships were given initially as loans, but the debts for up to 4 years of medical schooling were canceled for each year that the young doctor practiced in a community certified as "rural" by the State agency. This type of program is still operating in Kentucky, Virginia, North Carolina, and other States. In Virginia and Kentucky, the State department of health administers the program, while in North Carolina it is a separate governmental "North Carolina Medical Care Commission" (*56*). The latter State also subsidizes the education of dentists and optometrists for rural practice, and the programs in the several States differ in various details. Virginia's State Health Commissioner, however, comments: "It is hard to evaluate the effectiveness of the program. Certainly it has not been a great boon to (medical) practice in the rural areas; on the other hand, it has helped fill a monetary need for these students" (*57*).

Medical and surgical specialists are particularly lacking in rural areas, since, more than general practitioners, their successful practice requires the population concentration of the larger cities. For this reason, the pattern of group medical practice, which can bring together a team of specialists and general physicians in a viable professional enterprise has great potentialities for betterment of rural medical care. It is encouraging, therefore, that group medical practice has been increasing significantly in rural counties, even though it is still a minority phenomenon.

In 1959, physicians engaged in multispecialty group practice (as distinguished from single specialty clusters) in the United States constituted a ratio of 5.8 per 100,000 civilian population (*58*). While this is only a small percentage of the 132 physicians per 100,000 people in the nation, it represented a marked increase from the level of 2.2 physicians per 100,000 in group practice in 1946. The ratio is decidedly higher, moreover, in the isolated rural counties where, in 1959, it was 8.2 such physicians per 100,000, compared with 5.0 in the metropolitan counties. As a proportion of total physicians in private practice, furthermore, the rural predominance of group practice is more striking, as shown by the following figures for 1959:

Type of county	*Percentage of total private physicians in group practice*
Metropolitan	4.6
Adjacent	8.0
Isolated	12.6

Probably more basic than these several strategies for attracting doctors to rural areas has been the construction and improvement of smalltown hospitals, discussed earlier, and the extension of health insurance. Adequate facilities for medical practice and assurance of a satisfactory income are fundamental, although they cannot necessarily compensate for the cultural handicaps of small town, as against large city, life. Between 1949 and 1959, however, the net effect of all the forces at play produced a slight decrease in the ratio of doctors in the metropolitan and adjacent counties (135.9 down to 132.6 per 100,000 population) and a slight increase in the ratio within the isolated counties (73.7 up to 74.7 per 100,000). As noted earlier, well-to-do country dwellers can readily travel to a distant city for medical care, but an improved physician supply within rural counties has special importance for the rural poor.

Attracting nurses and other types of health personnel to rural districts is more directly dependent on organized measures, like hospital construction or health department enlargement, than is improvement of the doctor supply. Paramedical personnel, more than physicians and dentists, are mainly employed in organized health agencies. Yet, it is likely that the overall problem of rural health personnel will be most effectively solved within a framework of general improvement in the social and economic setting of rural community life.

Regionalization and Comprehensive Planning

The handicaps of rural ecology for the delivery of scientific medical service have led everywhere in the world to plans for greater use of transportation. Rural patients can be transported to an urban facility when necessary or urban specialists can travel to the hinterland. Moreover, the entire level of technical performance in rural hospitals can be elevated by continuous professional and administrative ties to better developed urban institutions. Rural populations, in other words, can be served not only by the facilities in the country, but by a network of both rural and urban facilities covering large geographic regions.

This concept of hospital regionalization has had extensive discussion in the United States, although its actual accomplishments have so far been spotty. In 1936, a private foundation set out to improve the quality of medical care for the rural people of Maine, through organization of a system of professional connections between hospitals in the small towns of that State and a large medical center in Boston (*59*). A somewhat similar network was organized in 1945 in the cluster of rural counties around Rochester, N.Y. (*60*). The principal impact of these programs has been to enrich the education of physicians, nurses, technicians, dieticians, and other personnel in rural hospitals, so as to improve their performance. Consultation services have gone from the center peripherally, but transfer of patients from the peripheral units to the center has occurred only occasionally. Upgrading the quality of smalltown hospitals may be expected to benefit the poorer rural people particularly, since they are least likely to travel to a distant city for medical care.

The regionalization idea was emphasized along another dimension, with the enactment of the National Hospital Survey and Construction (Hill-Burton) Act of 1946. The basic purpose of this law was to promote construction of hospitals in areas of bed deficiency and, as noted earlier in this report, a remarkable equalization among the States was accomplished. Between 1948 and 1965, the population of the United States increased by 37 percent, while the general hospital-bed supply increased by 70 percent. The relative bed increases were greater, moreover, in the more rural States. Among the 25 most urban States, 14 enjoyed an increase in their bed-population ratios over this span of years, while among the 25 most rural States, 20 benefited by such an increase (*61*). Not all this improvement can be attributed to the Hill-Burton Act, but the advantages for low income States written into the Federal granting formula suggest that in rural districts the improvement in hospital-bed supply has been largely due to the stimulus of this subsidy program. Between 1947 and 1966, nearly two-thirds of the $1,900 million Federal subsidy for general hospital construction went to communities of under 50,000 population.

Aside from their influence on quantitative improvement in hospital-bed supplies, the State "master plans" required under the Hill-Burton Act affected the technical content of hospital design. On the one hand, minimum standards were set for laboratories, infant nurseries, outpatient departments, and other basic features in all hospitals. On the other hand, excessively elaborate equipment was not allowed in rural facilities, so that complex cases would be referred to an urban center instead of being improperly handled locally. Furthermore, the Hill-Burton Act subsidized also the construction of public health centers—mainly to house local health departments—which helped to strengthen preventive and case-finding health services in low income rural districts. Between 1948 and 1965, there were 726 primary public health centers and 328 auxiliary health centers constructed throughout the nation, the great majority under the stimulus of the Hill-Burton program.

With respect to hospital operations or the professional relationships among personnel in regional networks of facilities, the achievements of the last 20 years have not been so impressive. Bricks and mortar may be necessary to lay the foundations for regionalization, but they are obviously not enough to induce cooperative behavior among the component units in a geographic system. One such theoretical system in northern Michigan—developed with the assistance of the Hill-Burton program and the Kellogg Foundation—was intensively studied over a 5-year period (1954–59). Two small rural hospitals of 19 beds and 18 beds were affiliated by a regionalization agreement with a 160-bed urban hospital 40 miles away, and another small 10-bed rural hospital was affiliated with a 226-bed hospital 25 miles away. Various exchanges were to be developed in the way of consultation services, transfer of patients, professional education, joint purchasing of supplies, etc. In practice, however, very little of this was carried out, and the investigators concluded: "In essence regionalization, with its signed agreements, remained, on the whole, a paper achievement." *(62)*.

Another regionalization effort, confined to the field of postgraduate medical education, was launched in the suburban and semirural districts encompassed in a 75-mile radius around New York City. Fifteen small community hospitals were affiliated with the medical center of the New York University College of Medicine, for a systematic program of continuing education through lectures and clinical case conferences offered by visiting professors. Local attendance, however, gradually diminished, interpersonal frictions developed, and after 17 years (1945–62) the program was terminated *(63)*. Other medical schools, which have launched similar educational programs, have not reported great success, and they may well be less candid than New York University in admitting failures.

Since about 1957, the hospital regionalization idea has come to have another meaning than that just discussed. Instead of providing a framework for bringing sound medical care to rural residents of large geographic areas, it has been applied to the developmental problems of hospitals within metropolitan centers. In the great cities, there are plenty of fiscal and administrative problems in the planning of hospital construction; the unfettered building of new hospitals—without considering the optimum use of the existing facilities—has led to wasteful inefficiencies. To cope with this, community leaders in Chicago, Pittsburgh, and other large cities organized voluntary hospital councils, representing philanthropic sources (usually local industrialists) as well as the hospitals themselves *(64)*. Through various indirect financial and moral pressures, these councils have attempted to influence the pattern of new hospital construction, or the renovation of existing facilities. They have also promoted certain joint administrative and professional practices (such as recruitment or in-service training of personnel) among the hospitals within the city *(65)*. By 1966, there were about 50 of these metropolitan councils in the nation—many of which had been stimulated and sustained by special Federal grants authorized under the 1960 Hill-Harris amendments to the Hill-Burton Act. While doubtless helping to optimize the nation's net investment in hospital construction, these metropolitan councils have done little to meet the special problems of rural populations, and especially of the rural poor.

It is not surprising, therefore, that in 1965 a very different approach to the problem of upgrading rural medical care through regionalization was taken by the Federal Government. Focusing on the nation's three leading causes of death—heart disease, cancer, and stroke—Congress enacted amendments to the Public Health Service Act to provide grants-in-aid for "regional medical programs . . . for research, training, diagnosis, and treatment relating to heart disease, cancer, or stroke." The intent is to promote much stronger ties than now exist between the great urban medical centers and the smaller hospitals or other health facilities in far-flung rural regions *(66)*. As in the earlier regionalization programs, the greatest emphasis seems to be placed on postgraduate education and consultation to local physicians in the smaller hospitals. It remains to be seen whether the potentialities of this program for improving the quality of medical service to the rural poor will be realized, at least with respect to the major killing diseases.

Finally, a still more far-reaching step has recently been taken by the Federal Government toward potential improvement of rural health service, by way of both geographic and functional planning. Public Law 89–749, enacted in 1966, provides for Federal grants to the States for comprehensive health planning of all health services, facilities, and manpower *(67)*. This is a wider definition of health planning authority than had so far been made by government in the United States, with clear intent to encompass both governmental and private activities, and financial support for the planning efforts. The new law calls for coordination of programs supported by local and State as well as Federal funds; it sets as a goal the achievement of high quality health service, both preventive and curative, for everyone. Planning, of course, is only a first step toward remedial action. If this step is taken in each State, the groundwork can be laid to increase the quantity of medical resources, to elevate their quality, and to coordinate their impact on the health needs of all rural people.

Problems That Must Be Solved

This report has examined the health needs and services of the rural poor, the organized programs operating to cope with the problems, and the deficiencies of the current situation. What can be done to improve the health of low income rural people, to reduce the gap between medical science and its application? What specific problems must be solved?

In the account of past and current programs of health service, clues to future answers are implicit. The essentials are easy enough to state as ultimate goals:

(1) the resources—in personnel and facilities—for sound health service must be made available,

(2) economic support for these services to all rural people, year in and year out, must be assured, and

(3) the quality of health service must be maintained through reasonable measures of social organization.

The attainment of these broad goals is not so easy. Certainly they could not be reached within the boundaries of life of the rural poor, nor of the rural population generally. Action would be necessary at the national level, as well as within rural States and communities. Moreover, changes would be necessary in the larger social and economic scene, as well as within the sphere of the health services.

Thus, approaches to the solution of the health problems of the rural poor may be suggested at three levels: (a) the total rural economy, (b) the national health scene, and (c) the local rural health field.

At the level of the total rural economy, it is obvious that many social improvements are essential to attainment of better health service. Elevation of rural family incomes is basic. Based on firmer agricultural and industrial foundations, improved housing would be necessary—whether in the small town or village or out in the open country. Better education is needed in elementary and high schools; all rural youth who can profit from it should be free to undertake higher education. While transportation has greatly improved, still more development is needed to connect isolated villages with the main cities. Higher incomes and better education would lay the groundwork for further measures of health protection, like sound nutrition and hygienic behavior. Segregation of minorities and racial discrimination in all its forms must be eliminated.

At the second level—the national health scene—several actions are necessary to achieve better health services for the rural poor. It is naive to expect the problems to be solved within the confines of rural communities. This would be true even if the total rural economy were highly advanced, but it is all the more so in the light of rural economic inequities which prevail and may be realistically expected to continue for some years. At the national level, health actions are needed in four main spheres.

First, health manpower must be produced in much greater numbers if the needs of rural and urban people are to be met. So long as the total supply is not adequate, redistribution of health personnel between city and county will help very little; the rural locations will remain at the bottom of the national barrel. Increased production of physicians, dentists, nurses, technicians, and other health personnel will require further support from National and State Governments. At the same time, new types of health worker should be explored—technical aids and assistants with skills appropriate to modern medical teamwork, instead of being frozen into the patterns of horse-and-buggy solo medical practice.

Second, the material foundations of medical service must be further strengthened through national action. Hospitals and health centers must be built wherever they are needed, with national economic assistance for construction as well as equipment.

Third, and extremely important, an economic arrangement must be made to pay for all the medical care that anyone needs. This complex requirement has had hundreds of piecemeal solutions in America. The achievements of voluntary health insurance have been reviewed in the pages above, as well as the great step forward of the Medicare law for the aged. Rural people, however, and especially the rural poor, are not well covered by voluntary insurance; even the fraction of the rural poor who are insured do not have comprehensive medical benefits. Continued efforts may enroll more of them in voluntary plans, but the soundest solution would undoubtedly be extension of the social insurance principle of Medicare to cover all age groups. Benefits should likewise be broadened to include physician's care in the office and home, as well as the hospital, dental care, prescribed drugs, and miscellaneous paramedical services.

If national comprehensive health insurance is enacted, many of the categorical programs discussed earlier would no longer be needed. The welfare medical services, with all their complex administrative features, are an awkward adjustment to the lack of national insurance; likewise for the Veterans' Administration program, the crippled children's services, the workmen's compensation medical entitlements, and all the other fragmented health programs. Special grants for migrant families and an independent program for reservation Indians would be obviated if everyone were protected by national health insurance. All these rural people would be encompassed in the main economic stream of medical care. If special health centers were needed to reach isolated families, they would be financed by the national health insurance fund. For low income persons who could not pay social insurance contributions, welfare agencies would pay the necessary premiums.

The fourth type of action needed at the national level concerns the multifarious problems of quality maintenance. Drug production, for example, obviously requires national controls, since the pharmaceutical industry is nationwide. Standards for medical specialty certification are now national, though voluntary, and the same is true of hospital accreditation. Similar promulgation and enforcement of national quality standards are needed in all other sectors of health service—including even basic professional licensing, which can no longer be scientifically justified on a State-by-State basis. Rural communities, more than urban, can benefit from the discipline of such national standards.

At the third level—the local rural health field—further actions are necessary. Even within the States and the rural communities, effective steps need some partial assistance from higher political levels, but distinct local measures are still feasible along five lines.

First, rural public health agencies in counties or larger multicounty districts need great strengthening. Their role should be not only to promote health education, environmental sanitation, and other preventive services, but also to coordinate all the preventive and curative services in the area. It is the local health department that should set up convenient health centers to serve seasonal agricultural workers, psychiatric clinics, cancer detection units, or rehabilitation centers. Likewise, the health department should oversee the local hospitals and nursing homes with respect to quality standards. National health insurance may pay most of the operating costs, but leadership is still necessary to organize the local technical resources.

Second, rural hospitals can be greatly improved in their internal organization. The economic support and quality standards proposed above will contribute to this, but local initiative by citizen boards of directors is still necessary. New patterns like that of the Hunterdon Medical Center, with a stable staff of hospital-based specialists supplemented by visiting general practitioners, should be launched in more rural communities (*68*).

Third, medical personnel should be attracted to rural communities much more systematically than they are now. The training of medical and dental students is already largely at social expense; even if they pay their own tuition, the latter covers only a small fraction of educational costs. It would be reasonable, therefore, to expect all new graduates to serve for a period in rural areas of need, as is widely required in other nations. Combined with the economic support of national health insurance, the provision of good hospitals and health centers, and a general increase in medical manpower, this policy could assure parity of doctors to serve rural people.

Fourth, there is the large task of breathing real life into the concept of health care regionalization. The planning of hospital construction along regional lines has made progress, but functional ties among the facilities in geographic regions are hardly developed. Implementation of the newly authorized regional medical programs for heart disease, cancer, and stroke requires far more imaginative action than has been shown in current projects, with their overwhelming attention devoted to postgraduate medical courses. Comprehensive health service planning, called for by further new legislation, must find ways to bring the benefits of urban medical science to the humblest village dweller.

Fifth, there remains the challenge of local voluntary action. Health service cooperatives can organize group-practice clinics, which bring specialty services to the countryside on an efficient and economical basis. Rural hospitals and health centers can always benefit from volunteer support. New ideas in better health care can be pioneered by local voluntary groups, long before government agencies at any level are able to act.

These five forms of health action at the local rural level, along with the major steps recommended at the national level, are no small challenge. They would be costly in effort and dollars, though easily within our economic capacity. Their benefits must be measured in both material and human values. The effects of improved health on economic productivity require no argument. But the value of a pain that is soothed, a wound that is dressed, a life that is saved goes beyond the happiness of the individual. The opportunity to receive the benefits of medical science and enjoy good health has become a basic human right. It has been articulated from the podium of the United Nations and the doorstep of the country store (*69*). Without this opportunity, families and communities can become demoralized and lose the will to act effectively in other spheres (*70*). With health services assured, the millions of poor people in rural America can be encouraged to tackle more energetically the many other social and economic problems they face. Their lives can attain the quality of which this nation is capable.

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ACKNOWLEDGMENTS

The author acknowledges the assistance of Daniel M. Anzel, assistant researcher in medical organization, School of Public Health, University of California at Los Angeles.

Chapter 19

Maternal and Child Health Programs and Rural Areas

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Historical

Late in the 19th century, private agencies in several large United States cities opened stations to distribute pasteurized milk for babies in an effort to reduce infant mortality. This was the beginning of the infant welfare movement in the United States. As clean milk became generally available, the purpose of these stations changed. They became centers for continuous health supervision and the prevention of disease in infancy and early childhood; there, mothers could receive health guidance, advice on infant feeding and nutrition, and demonstrations from nurses in the care of the baby.

As the child health programs grew, recognition of the great value of prenatal care in the prevention of maternal and infant deaths became widespread. During the first decade of the 20th century organized prenatal nursing services and prenatal medical clinics began to be included in public health programs. In 1908 the New York City department of health established a division of child hygiene. This action by the largest city in the United States accorded recognition to the importance of child hygiene and helped give impetus to a new era in maternal and child health.

The United States Government in 1912 created the U.S. Children's Bureau, the first agency of its kind in any national government. According to the creating legislation, the bureau shall ". . . investigate and report . . . upon all matters pertaining to the welfare of children and child life among all classes of people, and shall especially investigate the question of infant mortality, the birth rate . . . and diseases of children . . ."

An epoch in child health legislation was marked in 1921 with the passage of the Sheppard-Towner bill for the protection of mothers and infants, especially in rural areas. Administered by the Children's Bureau, this act provided for grants-in-aid to the States and thereby assisted in the creation of maternal and child health bureaus in many States. It lapsed in 1929 but laid the groundwork for the maternal and child health provisions of the Social Security Act.

The Social Security Act of 1935 authorized grants to the States for maternal and child health services and for services to crippled children under the provisions of title V, parts 1 and 2. These grants are administered by the Children's Bureau. The purposes of the grants are to enable the States to extend and improve, especially in rural areas, (1) services for promoting the health of mothers and children and (2) services for locating crippled children and for providing them with medical and hospital care. Maternal and child health programs are administered by State health departments; services for crippled children are offered by the State agency designated by the State, usually the State health department. An amendment enacted in 1965 requires the States to show progressive extension of their maternal and child health and crippled children's services, with a view to making such services available to children in all parts of the State by 1975.

Maternal and Child Health Services

Grants are provided to enable States to extend and improve services for promoting the health of mothers and children, especially in rural areas and areas suffering from economic distress. The States must provide matching funds for one-half of the amount appropriated; the remainder is not matched and is distributed to the States on the basis of the financial need of each State for assistance in carrying out its plan.

In the apportionment of part of the funds under the maternal and child health and crippled children's grants-in-aid programs a rural child is counted twice for each urban child in keeping with the statutory emphasis on rural areas. Thus the rural States receive proportionately a greater share of the apportionment of Federal funds and they have also a more favorable matching requirement than the urban States.

The appropriation for this program for fiscal year 1967 was $50 million, the amount authorized. For fiscal year 1968, the appropriation requested was the same; the amount authorized was $55 million.

States use the funds to pay the costs of conducting prenatal clinics where mothers are examined by physicians and get medical advice; for visits by public health nurses to homes before and after babies are born to help mothers care for their babies; for well-child clinics where mothers can bring their babies and young children for examinations and immunizations, where they can get competent advice on how to prevent illnesses, and where their many questions about care of babies can be answered. Such measures have been instrumental in the reduction of maternal and infant mortality. The funds are also used to make available doctors, dentists, and nurses to the schools for health examinations and immunizations of school children and advice to parents on where to get needed medical or dental care. Some States also provide for the medical and hospital care of premature babies in special hospital centers that meet certain standards and for mothers with complications of pregnancy.

Practically all States use some of the funds for improving the quality of services to mothers and children by providing special training opportunities to physicians, nurses, nutritionists, medical social workers, and other professional personnel. In addition, States have demonstration programs of various kinds, the most prominent of which are the mental retardation programs.

During the calendar year 1964, maternal and child health programs provided medical, prenatal, and postnatal clinic service to 287,000 mothers. Children attending medical well-child conferences numbered 1,485,000 of whom 605,000 were infants. Public health nursing services were provided 547,000 mothers and 2,862,000 children.

Medical and hospital care was provided 37,000 mothers who had complications of pregnancy. State health departments provided expert medical care in hospital premature centers for 8,000 prematurely born infants. General pediatric clinics provided diagnoses and consultation for 208,000 children.

About 2,447,000 school children were examined by physicians in school health services. Screening tests of vision were provided for 8,352,000 children and of hearing for 5,342,000.

Smallpox immunizations were given to 2,996,000 children and diphtheria immunizations to 4,306,000 children.

Progress in maintaining essential maternal and child health services has been seriously affected by the combination of a high birth rate and increasing costs of providing services. The population under 21 years of age has increased from 54.4 million in 1950 to an estimated 81.1 million in 1966. The medical care price index continues to rise and its increases exceed those of other components of the consumer price index. Salaries for professional staff, which account for a major proportion of maternal and child health funds, have likewise gone up. Similarly costs of training have increased.

Nutrition Problems in Rural Areas

Recent studies and informal observations reported by maternal and child health workers indicate that nutritional problems exist among many children in rural areas. Such problems can be thought of as those relating to (a) actual availability of adequate food resources; (b) ignorance, cultural patterns, etc., which lead to poor food and nutrition practices, (c) disease conditions which are associated with or affect nutritional status, (d) stress periods in life such as pregnancy, lactation, childhood, etc., in which nutrient demands are relatively high, etc.

A few recent references which document these problems are:

Plough, Irvin C., et al. *A Nutrition Survey of Three Rural Puerto Rican Communities*, Boletin de la Asociacion Medica de Puerto Rico, Vol. 55, Supplement, December 1963. These were family studies and included children and adults. Three communities were studied and in general "the results from all three communities were similar. The dietary study revealed low intakes of calcium, vitamin A and riboflavin. The quality of dietary protein was borderline. In spite of all of this the only clinical finding of note was retardation of growth as compared with U.S. standards. Laboratory results showed a high prevalence of hypochromic anemia among women and children, some hypoalbumenemi and low urinary excretion rates of riboflavin and thiamine. Intestinal parasitism was very common but few manifestations were severe."

Delgado, Graciela, et al. *Eating Patterns Among Migrant Families*. Public Health Reports 75, 4, April, 1961. "A study of the diet patterns of a group of Negro migrant families living in a labor camp in Belle Glade, Florida, revealed a lack of certain groups of protective foods. It also pointed up the need for better use of the foods available and for a wiser selection of foods purchased in relation to the amount of money spent."

Bryan, A. Hughes, and Anderson, Evelyn. *A Survey of the Dietary and Nutritional Problems of Crippled Children and Dietary Practices of Negro and White Families with Crippled Children in 5 Counties in Eastern North Carolina*. Studies were done in 5 rural counties of North Carolina. "The diets of 75% of the children were rated at less than 'obviously adequate' and poor family food practices were the most frequent cause of the dietary inadequacy. However, in about one crippled child in ten with a suboptimal dietary intake, the child's physical handicap was also an important causative factor. . . . The diets of 27 of the 39 children who were not participating in a school lunch program were rated as probably inadequate or obviously inadequate and two other cases were classified as doubtful information. In one of the large Negro schools in which there is no lunch program, the principal estimated that over half of the children had no lunch whatever, about 25% of the children brought biscuits or sandwiches and another 25% bought foods from a concessionaire. . . . All of the schools in the 5 study counties participated in the Federal Milk Program but not all of the children had money for the milk."

Selected abstracts from field reports of public health nutritionists serving rural areas:

"The nutritionist and the public health nurse visited four families where the nutritionist talked with the families regarding low cost foods. The first family visited was a family of ten where the income was $28 per week. The diet pattern was as follows: Breakfast—1 piece of bread, hot chocolate made with water, and coffee; Dinner—sometimes beans and sometimes potatoes; Supper—milk or water and bread. They had milk every other night. Water was the beverage when milk was not available. The nutritionist talked with the mother regarding the foods which are low in cost but supply many of the needed nutrients. She gave the mother a leaflet on "Low Cost Foods." The two figured out amounts

> which the mother would need to purchase and these were listed on the leaflet so the mother could use it as a shopping list. Prior to this visit the nutritionist had visited a large chain grocery and a local grocery store to price all foods listed in the leaflet 'Low Cost Foods.' Therefore, the cost as well as the amount could be approximately calculated. This was done so that the mother and nutritionist would know what part of the $28 was being spent for food."
>
> "The staff attended 18 well baby conferences and talked with 148 mothers. They talked with 179 patients at 27 maternity conferences. There were nine other contacts with families who had nutritional problems. Two mothers were visited on the hospital ward. Each had a child admitted because of malnutrition."
>
> "I might add that since returning, we have had a report of two children in that area with x-ray confirmation of a diagnosis of rickets. This family happens to have a net income of $3600. for nine children and their parents. Another family that we visited had a small baby that at eight months old was not crawling or walking and while we were there lay in her crib taking little interest in her surroundings. This eight month old baby's mother was well along into her 13th pregnancy, and I noted little signs of food in the house. Another example could be in a home with a diabetic child. The family and particularly an older sister understood and had planned excellent meals around the diabetic exchange, yet the supper meal for the family was to consist of potato soup and nothing else, apparently. It was toward the end of the month and pay day was still ahead."

The following suggestions are made with the view that many of the nutrition problems of rural children are similar to those of urban children and many of the following recommendations, therefore, could equally apply to both groups. Nutrition problems in rural areas are apt to be closely related to lack of community health (including nutrition) resources or inaccessibility to them. Thus, there may be need for more emphasis on different ways of delivering nutrition services; for example, mobile clinics; loan of qualified nutrition personnel or extra compensation for "hardship" posts; more "depots" or distribution points for food programs; better use of existing resources such as the school, TV, radio, etc., for nutrition education. Specific recommendations are:

(1) That there be more documentation of the type and extent of nutrition problems of all children, urban and rural. Two specific ways this could be achieved are: (a) More studies could be undertaken similar to the one on evaluation of nutritional status of preschool children in the United States (urban and rural) being supported by Children's Bureau research funds. Such studies should be extended to include other age groups. (b) Screening and diagnostic programs supported by the Children's Bureau (Children and Youth, Mental Retardation, Adolescent, etc.) and other agencies should have an assessment of nutritional status built into them. Some attempt to achieve this was made with the publication and distribution by the Children's Bureau of the Guidelines for Evaluating Nutritional Status of Preschool Children.

(2) In many rural communities, the school is considered a center for many types of activities—educational, social, recreational, cultural, etc. In some areas (rural and urban) the only health teaching received by children and their families is that provided through the local school. The preparation of the usual elementary, secondary, or college teacher is notoriously inadequate in health education, particularly nutrition. Concrete steps could be taken to improve the background of all teachers in health education, including nutrition.

If such training programs were planned cooperatively with health agency personnel, the programs would probably be more realistic and geared to actual health problems of the community (Federal, State, and local).

(3) Since it is often difficult to reach rural mothers and children on an individual or group basis, more use should be made of communications media for nutrition education. The potential of TV, radio, newspapers, etc. has not been utilized to the fullest extent to reach mothers and children with sound information about care and feeding of children and the family, etc. There is a good example of an effort to reach children and families in rural Maine with health education, including nutrition. The State health department nutritionist served on the planning committee and assisted with the development of these programs.

(4) Food distribution programs should be oriented more to meeting nutrition health needs rather than to a marketing or economic need. The U.S. Department of Agriculture should work more closely with Federal agencies responsible for health programs so that health needs and problems are adequately considered in the planning of food distribution programs. For example, the map of "Food Aid to Needy Families through USDA's Consumer and Marketing Service" shows many areas are participating in either program (fig. 1). It is in many of these same areas that there are concentrations of multiple maternal and child health problems such as high infant mortality rates.

(5) Many families with expectant mothers and young, growing children cannot obtain adequate food yet such is recommended as being necessary for maintenance or improvement of individual and family health. It should be possible for health agencies to arrange with other agencies who administer food or financial assistance, special provisions for mothers and children. Mothers and children with nutrition problems could then be certified by health agency personnel as having a medical need and efforts of other agencies should be extended to meet them in such ways as the following:

(a) extending special milk program with earmarked coupons or stamps made available to health agency personnel for distribution,

(b) actually making selected commodities such as milk and cereal available to health workers for distribution through clinics, in home visits, and in maternal and child health centers.

(6) Many mothers and children need education and help with the basic principles of child care, nutrition budgeting, home management, preparation

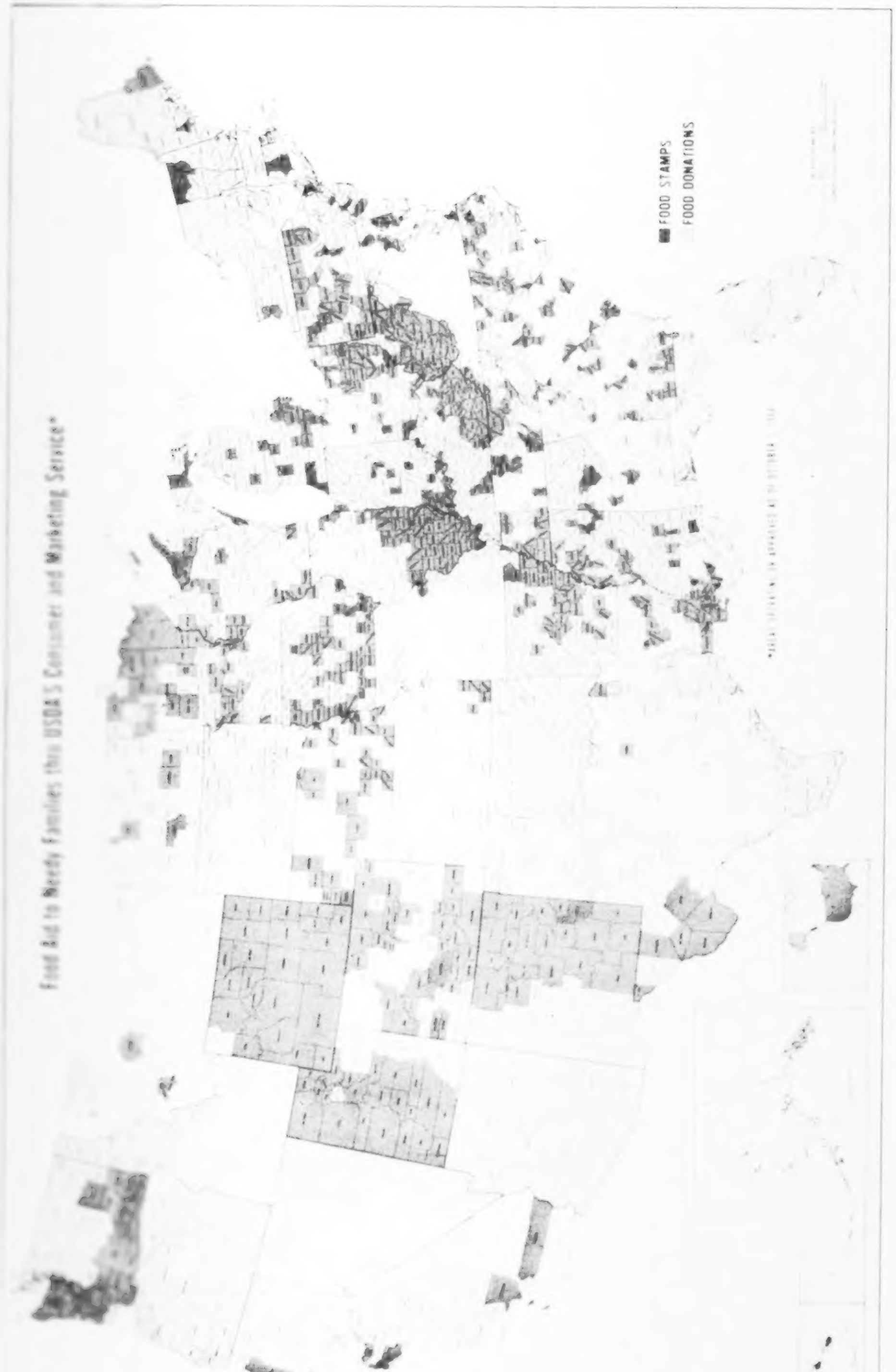
Food Aid to Needy Families thru USDA'S Consumer and Marketing Service*
FOOD STAMPS
FOOD DONATIONS

FIGURE 1

of food, etc. More of home economics related services could be extended through health agencies by use of home economists and auxiliary workers such as nutrition aids, home management aids, etc.

(7) Agriculturally oriented or sponsored agencies which serve rural areas may work independently of Federal, State, and local health agencies responsible for the health services of all citizens. If such agencies are to continue carrying out health education, including nutrition activities, then steps should be taken to assure more coordinated and cooperative planning so that efforts are focused on those areas identified by health agencies as being major problem areas. Often-times such health education activities (including nutrition) are planned out of the land-grant college (agriculture and home economics) with little, if any, communication with the State health agency which may be located in the capital city some miles distant. It would seem more sound if goals and priorities in health education were determined by the public health agency and then support of other agencies such as Agriculture, Commerce, and Interior were sought in achieving them. In this way there would be a united rather than fragmented effort toward common goals.

Infant Mortality

A third of the nation's children are born in families living in counties with no urban center as large as 50,000 population (1960). And about half of these children (16 percent) are born in the counties adjacent to those with a metropolitan city (50,000 or more), while the others (18 percent) are in families in isolated counties relatively remote from any large urban center.

During the years 1961–65, the annual average number of live births in adjacent and isolated counties was 1,380,000. It is noteworthy that over 60 percent of the births in the adjacent counties were in States with low or middle range State per capita income (1963–65). In the case of isolated counties, which accounted for nearly a fifth of the U.S. live births in these years, 84 percent were in the isolated counties of the States with per capita income in the low or middle range. The concentration in low and middle per capita income States of live births in the nonmetropolitan counties (adjacent and isolated) was especially marked in the nonwhite group, while present also in the white group.

The combination of isolation and limited resources reduces the infant's chances of survival. Infant mortality rates are higher in adjacent and isolated counties than in metropolitan counties and the percentage excess in rate over national average rate is confined, generally, to States in the low and middle range of State per capita income (1963–65).

Infant mortality rates in the period 1961–65 are shown in table 1 according to county group and per capita income groups of States. For the country as a whole, the infant death rate in counties adjacent to metropolitan areas was 2 percent above the U.S. rate of 25.1 per 1,000 live births. In the low per capita income group of States the rate for their adjacent counties was 19 percent higher than the national average, while the middle per capita income group about equaled the national average.

TABLE 1.—*Infant mortality rate by color, county group, and per capita income group of States: United States, 1961–65*

[Exclusive of fetal deaths. Rate is deaths under 1 year per 1,000 live births.]

County group	United States	Per capita income group of States (1963–65)		
		High (17 States)[1]	Middle (17 States)	Low (17 States)
Total infants				
All county groups	25.1	23.5	24.7	29.3
Metropolitan	24.1	23.5	24.2	27.1
Greater	24.0	24.0	23.9	25.5
Lesser	24.2	22.7	26.8	27.2
Adjacent	25.5	22.5	25.0	29.9
Isolated	28.1	24.6	25.9	31.1
Semirural	27.9	24.0	25.7	31.1
Rural	29.2	30.4	26.8	30.7
White infants				
All county groups	22.0	21.3	22.3	23.3
Metropolitan	21.4	21.1	21.7	21.8
Greater	21.0	20.9	21.1	21.3
Lesser	22.5	21.8	22.2	21.8
Adjacent	22.6	21.8	23.0	23.7
Isolated	23.8	22.8	23.4	24.5
Semirural	23.6	22.7	23.4	24.4
Rural	24.2	23.6	23.5	24.8

TABLE 1.—*Infant mortality rate by color, county group, and per capita income group of States: United States, 1961–65*—Continued

[Exclusive of fetal deaths. Rate is deaths under 1 year per 1,000 live births.]

County group	United States	Per capita income group of States (1963–65)		
		High (17 States)[1]	Middle (17 States)	Low (17 States)
Nonwhite infants				
All county groups	41.1	37.0	41.7	45.3
Metropolitan	38.2	36.7	39.4	41.1
Greater	37.7	37.5	38.2	38.5
Lesser	38.9	33.9	41.0	41.3
Adjacent	45.0	38.6	45.9	46.0
Isolated	48.1	43.8	47.7	48.7
Semirural	47.8	39.1	48.1	48.8
Rural	49.5	63.8	47.0	48.8

Source: Department of Health, Education, and Welfare, National Center for Health Statistics. Department of Commerce, Survey of Current Business, August 1966.

[1] Includes District of Columbia.

In isolated counties of the U.S. the infant mortality rate exceeded the national rate by 12 percent. The excess in rate reached 24 percent for these counties in the low per capita income group of States.

Infant mortality in the single year 1965 in comparison with 1964 illustrates the continuing lack of clear-cut and substantial gains in reducing the infant death rate. In tables 2, 3, and 4 infant mortality rates in 1964 and 1965 in metropolitan and nonmetropolitan counties are shown by age and color group. Nonmetropolitan counties include adjacent and isolated counties. Only among nonwhite infants were significant reductions recorded, and these were larger (—2.3 percent) in urban

TABLE 2.—*Infant mortality rate in urban places (10,000 population and over in 1960) and other places, in metropolitan and nonmetropolitan counties, 1964 and 1965*

[By place of residence. Exclusive of fetal deaths. Rate is deaths under 1 year per 1,000 live births.]

County group[1] and place size	Rate per 1,000 live births		Percent change in rate 1965 from 1964[2]
	1965	1964	
Total infants			
United States	24.7	24.8	(−0.4)
Urban, 10,000 or more	25.1	25.3	(−0.8)
Rural, and urban places under 10,000	24.3	24.2	(+0.4)
Metropolitan	23.8	24.0	(−0.8)
Urban, 10,000 or more	24.9	25.2	(−1.2)
Rural, and urban places under 10,000	21.1	21.1	0
Nonmetropolitan	26.3	26.2	(+0.4)
Urban, 10,000 or more and under 50,000	25.6	25.8	(−0.8)
Rural, and urban places under 10,000	26.5	26.3	(+0.8)
White infants			
United States	21.5	21.5	0
Urban, 10,000 or more	21.6	21.9	(−1.4)
Rural, and urban places under 10,000	21.4	21.2	(+0.9)
Metropolitan	20.9	21.0	(−0.5)
Urban, 10,000 or more	21.4	21.7	(−1.4)
Rural, and urban places under 10,000	19.8	19.7	(+0.5)
Nonmetropolitan	22.7	22.6	(+0.4)
Urban, 10,000 or more and under 50,000	23.0	23.0	0
Rural, and urban places under 10,000	22.6	22.4	(+0.9)
Nonwhite infants			
United States	40.3	41.1	−1.9
Urban, 10,000 or more	38.0	38.9	−2.3
Rural, and urban places under 10,000	44.9	45.4	−1.1
Metropolitan	37.8	38.5	(−1.8)
Urban, 10,000 or more	37.6	38.3	(−1.8)
Rural, and urban places under 10,000	39.3	40.3	(−2.5)
Nonmetropolitan	45.5	46.2	(−1.5)
Urban, 10,000 or more and under 50,000	41.4	43.6	(−5.0)
Rural, and urban places under 10,000	46.6	46.9	(−0.6)

Source: Public Health Service, National Center for Health Statistics.

[1] In general, metropolitan counties are those with a city of 50,000 or more, 1960. Nonmetropolitan counties have no urban place as large as 50,000 population, 1960.

[2] Parentheses signify lack of statistical significance.

places (10,000 or more) than in rural areas and smaller towns, where the reduction was —1.1 percent. While the reduction in rate is noteworthy for the nonwhite group, particularly in the neonatal period, the fact remains that the infant death rate experienced in 1965 in the nonwhite group living in rural areas and towns under 10,000 population was more than double that of white infants; 44.9 per 1,000 as compared with 21.4. At the same time the excess in rate for the nonwhite infants in larger towns and metropolitan cities amounted to 75 percent (38.0 per 1,000 versus 21.6).

TABLE 3.—*Neonatal mortality rate in urban places (10,000 population and over in 1960), and other places, in metropolitan and nonmetropolitan counties, 1964 and 1965*

[By place of residence. Exclusive of fetal deaths. Rate is deaths under 1 year per 1,000 live births.]

County group [1] and place size	Rate per 1,000 live births		Percent change in rate 1965 from 1964 [2]
	1965	1964	
Total infants			
United States	17.7	17.9	−1.1
Urban, 10,000 or more	18.5	18.9	−2.1
Rural, and urban places under 10,000	16.7	16.7	0
Metropolitan	17.6	17.9	−1.8
Urban, 10,000 or more	18.5	18.9	−2.1
Rural, and urban places under 10,000	15.4	15.6	(−1.3)
Nonmetropolitan	17.8	17.8	0
Urban, 10,000 or more and under 50,000	18.5	18.8	(−1.6)
Rural, and urban places under 10,000	17.6	17.5	(+0.6)
White infants			
United States	16.1	16.2	(−0.6)
Urban, 10,000 or more	16.5	16.8	−1.8
Rural, and urban places under 10,000	15.7	15.6	(+0.6)
Metropolitan	15.8	16.1	−1.9
Urban, 10,000 or more	16.3	16.6	(−1.8)
Rural, and urban places under 10,000	14.8	14.9	(−0.7)
Nonmetropolitan	16.6	16.4	(+1.2)
Urban, 10,000 or more and under 50,000	17.4	17.4	0
Rural, and urban places under 10,000	16.4	16.1	(+1.9)
Nonwhite infants			
United States	25.4	26.5	−4.2
Urban, 10,000 or more	26.2	27.3	−4.0
Rural, and urban places under 10,000	23.8	24.9	−4.4
Metropolitan	26.1	27.0	−3.3
Urban, 10,000 or more	26.4	27.3	−3.3
Rural, and urban places under 10,000	24.0	25.0	−4.0
Nonmetropolitan	24.0	25.4	−5.5
Urban, 10,000 or more and under 50,000	24.9	27.3	−8.8
Rural, and urban places under 10,000	23.8	24.9	−4.4

Source: Public Health Service, National Center for Health Statistics.

[1] In general, metropolitan counties are those with a city of 50,000 or more, 1960. Nonmetropolitan counties have no urban place as large as 50,000 population, 1960.

[2] Parentheses signify lack of statistical significance.

TABLE 4.—*Postneonatal mortality rate in urban places (10,000 population and over in 1960), and other places, in metropolitan and nonmetropolitan counties, 1964 and 1965*

[By place of residence. Exclusive of fetal deaths. Rate is deaths under 1 year per 1,000 live births.]

County group [1] and place size	Rate per 1,000 live births		Percent change in rate 1965 from 1964 [2]
	1965	1964	
Total infants			
United States	7.0	6.9	(+1.4)
Urban, 10,000 or more	6.6	6.4	+3.1
Rural, and urban places under 10,000	7.6	7.5	(+1.3)
Metropolitan	6.2	6.1	+1.6
Urban, 10,000 or more	6.5	6.3	+3.2
Rural, and urban places under 10,000	5.7	5.5	+3.6
Nonmetropolitan	8.5	8.4	(+1.2)
Urban, 10,000 or more and under 50,000	7.1	7.1	0
Rural, and urban places under 10,000	8.9	8.8	(+1.1)
White infants			
United States	5.4	5.4	0
Urban, 10,000 or more	5.2	5.1	(+2.0)
Rural, and urban places under 10,000	5.7	5.7	0
Metropolitan	5.1	5.0	(+2.0)
Urban, 10,000 or more	5.1	5.0	(+2.0)
Rural, and urban places under 10,000	5.0	4.8	+4.2
Nonmetropolitan	6.1	6.1	0
Urban, 10,000 or more and under 50,000	5.6	5.6	0
Rural, and urban places under 10,000	6.2	6.3	−1.6)
Nonwhite infants			
United States	14.9	14.6	+2.1)
Urban, 10,000 or more	11.8	11.6	+1.7)
Rural, and urban places under 10,000	21.1	20.5	+2.9)
Metropolitan	11.7	11.5	+1.7)
Urban, 10,000 or more	11.3	11.0	+2.7)
Rural, and urban places under 10,000	15.2	15.3	−0.7)
Nonmetropolitan	21.5	20.8	+3.4)
Urban, 10,000 or more and under 50,000	16.5	16.3	(+1.2)
Rural, and urban places under 10,000	22.9	22.1	(+3.6)

Source: Public Health Service, National Center for Health Statistics.

[1] In general, metropolitan counties are those with a city of 50,000 or more, 1960. Nonmetropolitan counties have no urban place as large as 50,000 population, 1960.

[2] Parentheses signify lack of statistical significance.

State infant mortality rates in 1965 are shown in table 5 in which States are ranked on the basis of State per capita income in 1963–65. In the high per capita income group of States, 11 had rural population below the national average proportion of 30.1 percent (1960). (See table 6.) The infant death rate for these States as a group was 23.3 per 1,000, and about 6 percent below U.S. average of 24.7. The

TABLE 5.—*Average annual per capita income (1963–65) and infant mortality rate, 1965: United States and each State in high, middle, and low per capita income groups of States*

[By place of residence. Rate is number of deaths under 1 year per 1,000 live births. Exclusive of fetal deaths.]

Per capita income group of States	Average annual per capita income, 1963–65		Infant mortality (rate per 1,000 live births)	Ratio to U.S. rate
	Dollars	Rank		
United States	2,593	.....	24.7	100
High (17 States)	.....	.....	23.3	94
Dist. of Columbia	3,535	1	32.0	130
Nevada	3,262	2	24.8	100
Connecticut	3,251	3	21.9	89
Delaware	3,175	4	24.3	98
California	3,129	5	22.1	89
New York	3,127	6	23.4	95
New Jersey	3,090	7	23.2	94
Illinois	3,081	8	25.6	104
Alaska	3,043	9	38.1	154
Massachusetts	2,902	10	22.2	90
Maryland	2,834	11	24.7	100
Michigan	2,789	12	23.6	96
Hawaii	2,767	13	21.3	86
Washington	2,747	14	21.4	87
Rhode Island	2,660	15	22.5	91
Ohio	2,659	16	22.3	90
Indiana	2,638	17	23.5	95
Middle (17 States)	.....	.....	24.1	98
Oregon	2,611	18	21.1	85
Pennsylvania	2,592	19	23.3	94
Colorado	2,584	20	24.3	98
Wisconsin	2,544	21	21.9	89
Kansas	2,509	22	20.4	83
Missouri	2,493	23	25.4	103
Minnesota	2,492	24	20.3	82
Wyoming	2,468	25	22.1	89
Iowa	2,457	26	20.6	83
New Hampshire	2,440	27	21.1	85
Nebraska	2,429	28	22.6	91
Montana	2,319	29	25.0	101
Arizona	2,287	30	25.4	103
Florida	2,284	31	28.3	115
Utah	2,279	32	18.7	76
Virginia	2,259	33	26.6	108
Texas	2,217	34	26.0	105
Low (17 States)	.....	.....	28.8	117
Idaho	2,191	35	24.5	99
Vermont	2,151	36	21.9	89
Oklahoma	2,130	37	23.1	94
Maine	2,120	38	22.6	91
New Mexico	2,112	39	26.9	109
North Dakota	2,091	40	21.2	86
Georgia	2,014	41	28.9	117
South Dakota	1,999	42	22.7	92
Louisiana	1,948	43	30.5	123
Kentucky	1,923	44	25.3	102
North Carolina	1,921	45	30.5	123
West Virginia	1,899	46	26.8	109
Tennessee	1,887	47	28.0	113
Alabama	1,787	48	30.8	125
Arkansas	1,737	49	25.7	104
South Carolina	1,707	50	31.3	127
Mississippi	1,509	51	40.6	164

Sources: U.S. Department of Commerce, Office of Business Economics, Regional Economics Division. Survey of Current Business, August, 1966. U.S. Department of Health, Education and Welfare, National Center for Health Statistics.

TABLE 6.—*Percent of the population that was rural in 1960, by States ranked by per capita income (1963–65)*

Per capita income group of States (1963–65)	United States	High rurality (17 States)	Middle rurality (17 States)	Low rurality (17 States)
	Percent	*Percent*	*Percent*	*Percent*
United States	30.1	45.7–64.8	29.6–45.2	11.4–28.4
HIGH (17 States)				
District of Columbia	.....	.....	.....	.....
Nevada	.....	.....	29.6	.....
Connecticut	.....	.....	.....	21.7
Delaware	.....	.....	34.4	.....
California	.....	.....	.....	13.6
New York	.....	.....	.....	14.6
New Jersey	.....	.....	.....	11.4
Illinois	.....	.....	.....	19.3
Alaska	.....	62.1	.....	.....
Massachusetts	.....	.....	.....	16.4
Maryland	.....	.....	.....	27.3
Michigan	.....	.....	.....	26.6
Hawaii	.....	.....	.....	23.5
Washington	.....	.....	31.9	.....
Rhode Island	.....	.....	.....	13.6
Ohio	.....	.....	.....	26.6
Indiana	.....	.....	37.6	.....
Total	17	1	4	11
MIDDLE (17 States)				
Oregon	.....	.....	37.8	.....
Pennsylvania	.....	.....	.....	28.4
Colorado	.....	.....	.....	26.3
Wisconsin	.....	.....	36.2	.....
Kansas	.....	.....	39.0	.....
Missouri	.....	.....	33.4	.....
Minnesota	.....	.....	37.8	.....
Wyoming	.....	.....	43.2	.....
Iowa	.....	47.0	.....	.....
New Hampshire	.....	.....	41.7	.....
Nebraska	.....	45.7	.....	.....
Montana	.....	49.8	.....	.....
Arizona	.....	.....	.....	25.5
Florida	.....	.....	.....	26.1
Utah	.....	.....	.....	25.1
Virginia	.....	.....	44.4	.....
Texas	.....	.....	.....	25.0
Total	17	3	8	6
LOW (17 States)				
Idaho	.....	52.5	.....	.....
Vermont	.....	61.5	.....	.....
Oklahoma	.....	.....	37.1	.....
Maine	.....	48.7	.....	.....
New Mexico	.....	.....	34.1	.....
North Dakota	.....	64.8	.....	.....
Georgia	.....	.....	44.7	.....
South Dakota	.....	60.7	.....	.....
Louisiana	.....	.....	36.7	.....
Kentucky	.....	55.5	.....	.....
North Carolina	.....	60.5	.....	.....
West Virginia	.....	61.8	.....	.....
Tennessee	.....	47.7	.....	.....
Alabama	.....	.....	45.2	.....
Arkansas	.....	57.2	.....	.....
South Carolina	.....	58.8	.....	.....
Mississippi	.....	62.3	.....	.....
Total	17	12	5	0

Sources: U.S. Department of Commerce, Office of Business Economics, Regional Economics Division. Survey of Current Business, August 1966; Statistical Abstract of United States, 1966.

low per capita income States had rural population in each case well beyond U.S. average, and an infant death rate of 28.8 per 1,000, about 17 percent in excess of the U.S. rate. However, exceptions will be seen in the case of individual States, in the tendency for rurality, low financial resources, and relatively high mortality to associate.

The increased fatal risks experienced by infants in rural families living in poverty conditions are shown in table 7, which lists the approximately 10 percent of U.S. counties with level of living index, for their rural population, lowest among all U.S. counties, 1960. Infant mortality rates for the period 1956–60 are shown for each county, together with the percentile group in which the rate falls in the U.S. array of all of the county rates in the period, from lowest rate and percentile to highest. The level of living for county rural population is a composite ranking, determined by the U.S. Department of Agriculture, on the basis of five factors.[1] The individual percentile position of the county in respect to *one* of the factors, namely, number of rural families with income under $3,000 (1959), is shown in the table. Percent of live births in the county to nonwhite mothers is also shown for each county. Practically all of the counties with rural population living in severe deprivation as judged by the level of living index have excessive infant mortality rates, few falling below the 51–60 percentile group, where rates near median and lower would be found.

The correspondence between excessive infant mortality, and socioeconomic deprivation in the rural population is shown geographically in county maps showing the fifth (Quintile V) of U.S. counties with highest infant death rates, 1956–60 (fig. 2), and the fifth of counties ranking lowest on the composite index of relative socioeconomic status of the rural population (fig. 3).

Concentrations in the rural population of poverty, disease, and fatalities are evident where areas are common to both indices. These are principally in the South, East, Central States, and West.

Considerable discrepancy in area is to be expected because the infant death rates are not specific for rural infants, but cover the total infant population of the county.

Maternal Mortality

In 1964, one third of the 1,343 maternal deaths in the United States were of mothers in rural areas and small towns of less than 10,000 inhabitants outside of metropolitan counties. The maternal mortality rate in these largely unurbanized areas was higher than elsewhere, 40.9 per 100,000 live births and 23 percent above national average at 33.3 per 100,000.

The lowest maternal death rate, 25 per 100,000, prevailed in the areas, largely suburban, surrounding the great cities of the metropolitan counties. Here the maternal death toll was 25 per 100,000 and below the U.S. average by one-fourth. The experience of mothers in these areas shows that many of the maternal deaths in outlying rural areas and small towns can be prevented.

Health Needs of the Child Population in Rural Areas

Of the 43.1 million children 5 to 17 years of age in 1960 in the United States, 18.6 percent were in families with income under $3,000 (1959).

In the low per capita income group of 17 States (1963–65), all with 1960 rural population in above-average proportion, over a third of children at these ages were in families with income below the $3,000 mark (table 8).

In several of the middle per capita income group of States the proportion of children 5 to 17 in families with income under $3,000 was above the U.S. average—notably Missouri, Florida, Virginia, and Texas.

Children living outside of the great urban centers (Standard Metropolitan Statistical Areas) tend to be seen less frequently for checkups and other physician services than children in SMSA's. In fiscal year 1964, children under 15 years in these highly urbanized areas experienced 4.1 physician visits per child, while children outside the SMSA's had 3.3 visits per year if not on a farm and 2.3 visits per year if they lived on farms.

The proportion of children under 15 who had not seen a physician within a year was 14.7 percent on the average, 14.0 percent in SMSA's. For farm and nonfarm groups outside of these urbanized areas, the proportions were 16.4 and 15.9 percent, respectively.

Physician Supply

Estimates are given in table 9 of numbers of added physicians needed to provide services in adjacent and isolated counties of the United States at the national average physician-population ratio which prevailed in 1962, the latest year for which we have data for county groupings of metropolitan, adjacent, and isolated.

The largest numbers of physicians to increase services were called for in counties adjacent to the metropolitan counties, except in low per capita income (1961–63) States. In these States as a group, the isolated semirural counties, with 12,751,000 population (1962), evidenced the greatest need for added physicians. For the United States as a whole,

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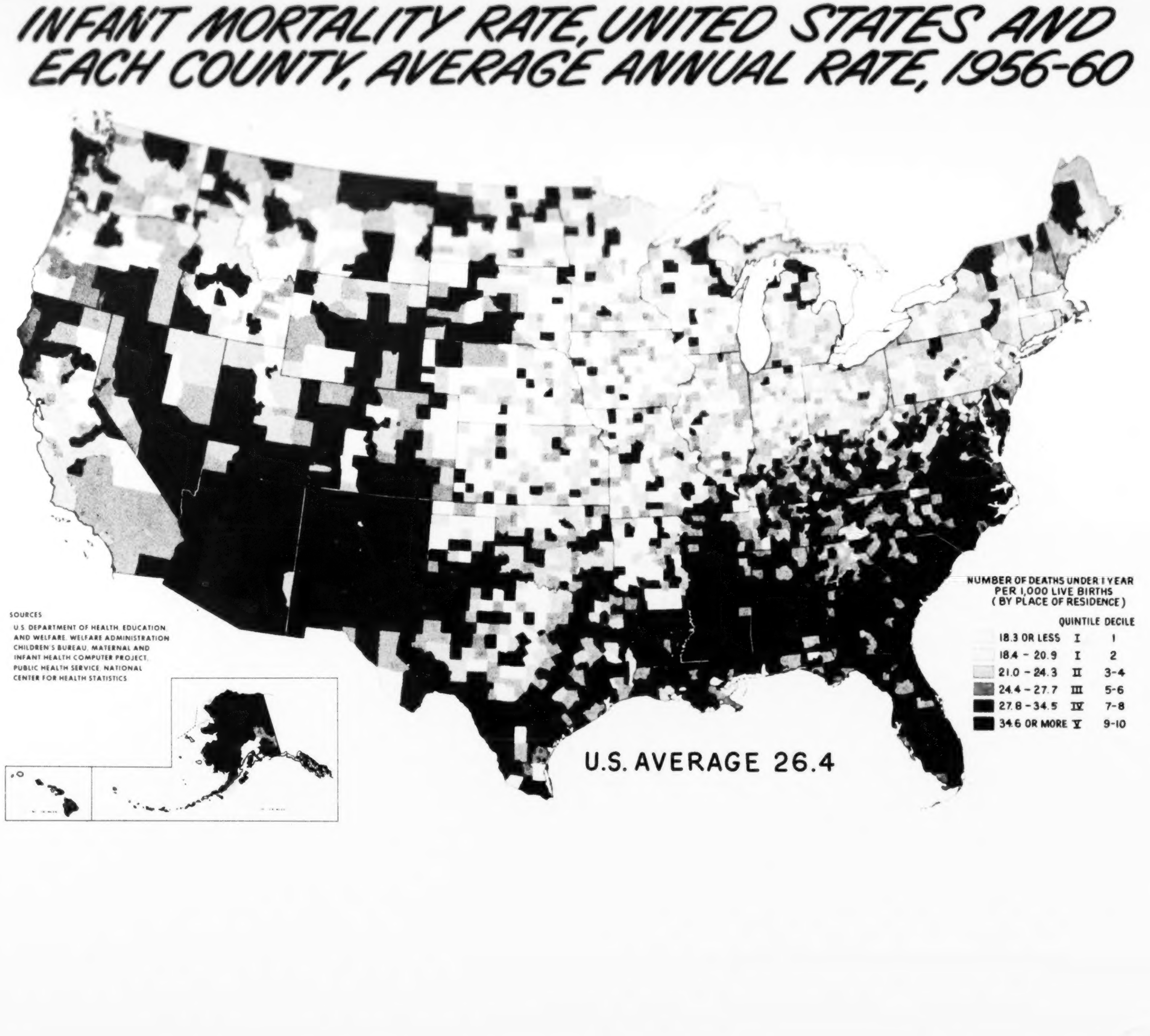
[1] Dependency ratio; number of rural families with less than $3,000 income (1959); percent of rural families with under $3,000 income (1959); percent of rural persons, 25 years and over with less than 7 years schooling completed, 1960; percent of rural housing units deteriorating and dilapidated, 1960.


INFANT MORTALITY RATE, UNITED STATES AND EACH COUNTY, AVERAGE ANNUAL RATE, 1956-60

NUMBER OF DEATHS UNDER 1 YEAR
PER 1,000 LIVE BIRTHS
(BY PLACE OF RESIDENCE)
QUINTILE DECILE
18.3 OR LESS I 1
18.4 - 20.9 I 2
21.0 - 24.3 II 3-4
24.4 - 27.7 III 5-6
27.8 - 34.5 IV 7-8
34.6 OR MORE V 9-10
U.S. AVERAGE 26.4

SOURCES
U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, WELFARE ADMINISTRATION CHILDREN'S BUREAU, MATERNAL AND INFANT HEALTH COMPUTER PROJECT. PUBLIC HEALTH SERVICE, NATIONAL CENTER FOR HEALTH STATISTICS

FIGURE 2

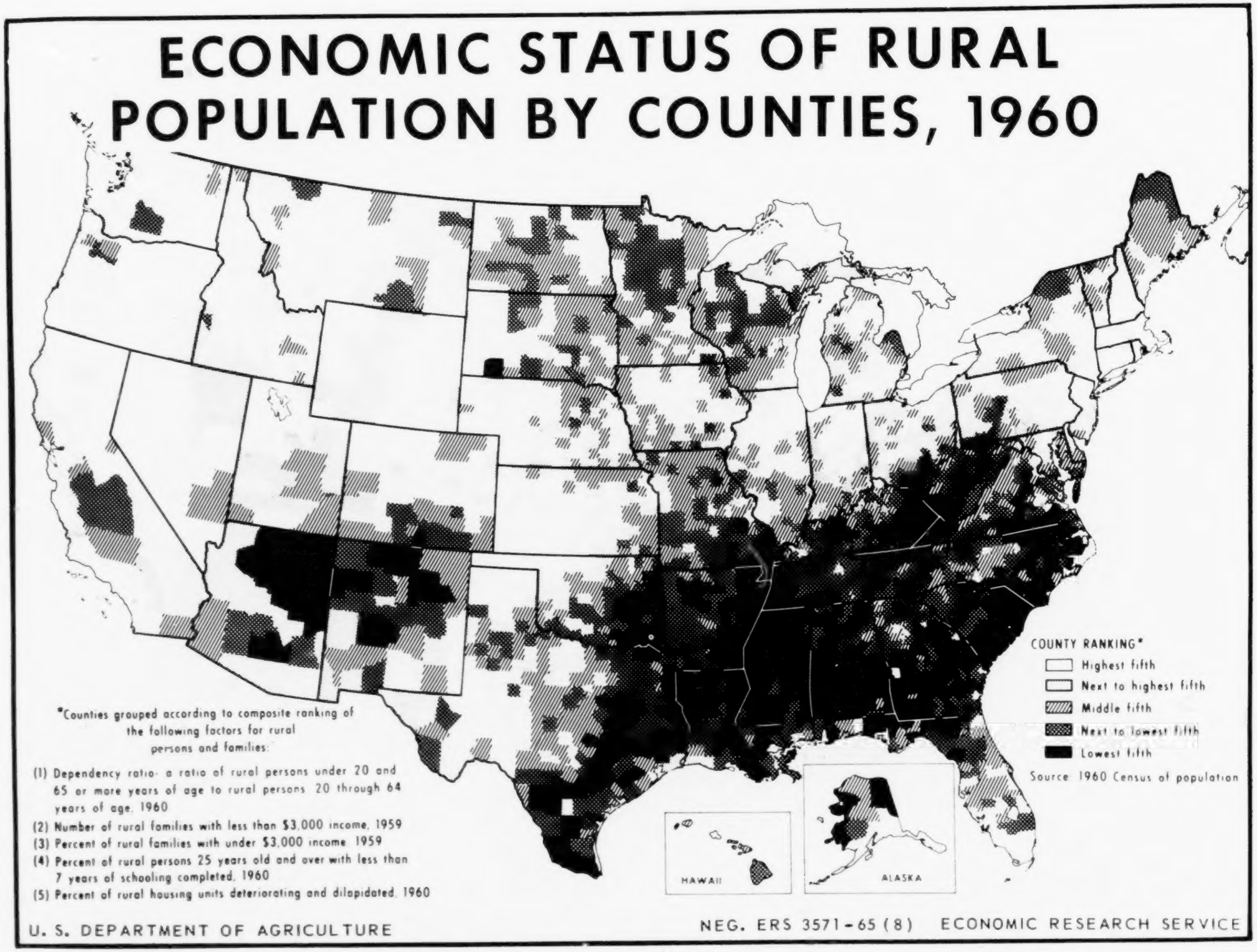

ECONOMIC STATUS OF RURAL POPULATION BY COUNTIES, 1960
COUNTY RANKING*
Highest fifth
Next to highest fifth
Middle fifth
Next to lowest fifth
Lowest fifth
Source: 1960 Census of population
*Counties grouped according to composite ranking of the following factors for rural persons and families:
(1) Dependency ratio- a ratio of rural persons under 20 and 65 or more years of age to rural persons 20 through 64 years of age, 1960
(2) Number of rural families with less than $3,000 income, 1959
(3) Percent of rural families with under $3,000 income 1959
(4) Percent of rural persons 25 years old and over with less than 7 years of schooling completed, 1960
(5) Percent of rural housing units deteriorating and dilapidated, 1960
HAWAII
ALASKA
U. S. DEPARTMENT OF AGRICULTURE
NEG. ERS 3571-65 (8)
ECONOMIC RESEARCH SERVICE

FIGURE 3

TABLE 7.—*Infant mortality rates in the 10 percent of U.S. counties with lowest level of living index for rural population, 1960*[1]*: United States and 306 Counties, 1956–60*

[Exclusive of fetal deaths. By place of residence. Rate in number of deaths under 1 year per 1,000 live births.]

Area	Percentile position of number of rural families with income under $3,000 (1959)[2]	Infant mortality rate per 1,000 (1956–60)		Percent of live births, nonwhite 1956–60
		Rate	U.S. percentile group[3]	
Alabama	.....	32.5	.....	37.9
Autauga	69	39.3	81–90	55.0
Barbour	89	47.6	91–100	64.8
Bibb	73	41.3	91–100	43.9
Bullock	63	57.8	91–100	83.1
Butler	89	29.5	61–70	57.8
Choctaw	85	40.1	91–100	62.0
Clarke	86	40.2	91–100	60.4
Coffee	86	22.4	21–30	26.5
Conecuh	82	38.4	81–90	62.8
Crenshaw	88	32.7	71–80	38.4
Dallas	96	40.8	91–100	63.1
Greene	73	38.5	81–90	88.2
Hale	88	45.7	91–100	82.4
Henry	70	40.1	91–100	64.6
Houston	94	33.8	71–80	36.2
Jackson	97	27.2	51–60	7.4
Lawrence	95	30.5	61–70	26.9
Limestone	97	39.3	81–90	25.0
Lowndes	81	43.8	91–100	89.3
Macon	87	41.5	91–100	87.6
Marengo	89	33.6	71–80	71.5
Monroe	89	31.8	71–80	65.8
Montgomery	90	34.5	71–90	48.6
Perry	96	38.8	81–90	79.4
Pickens	88	33.6	71–80	56.5
Pike	82	42.1	91–100	56.2
Russell	83	36.9	81–90	55.9
Sumter	89	40.0	81–90	87.6
Talladega	92	36.5	81–90	40.3
Wilcox	90	42.3	91–100	86.9
Arizona	.....	33.2	.....	15.5
Apache	91	56.4	91–100	83.1
Navajo	89	62.1	91–100	61.7
Arkansas	.....	26.4	.....	30.4
Chicot	56	32.3	71–80	67.2
Craighead	97	27.1	51–60	4.3
Arkansas (continued)				
Crittenden	98	40.1	91–100	68.0
Cross	83	27.1	51–60	41.3
Desha	75	22.3	21–30	56.2
Drew	67	19.0	11–20	46.0
Greene	89	29.0	61–70	0.1
Jackson	82	40.5	91–100	21.5
Jefferson	98	30.7	61–70	51.0
Lafayette	53	26.7	51–60	61.4
Lawrence	87	25.2	41–50	0.9
Lee	88	30.7	61–70	70.5
Mississippi	99	39.2	81–90	33.2
Monroe	74	37.0	81–90	58.0
Phillips	96	29.7	61–70	66.2
Poinsett	94	35.2	81–90	13.2
St. Francis	95	34.0	71–80	65.9
Woodruff	83	33.2	71–80	56.0
Florida	.....	31.3	.....	27.6
Gadsden	92	60.6	91–100	75.1
Jackson	97	27.5	51–60	38.9
Madison	63	37.7	81–90	57.9
Georgia	.....	31.4	.....	35.7
Appling	53	26.1	51–60	31.3
Atkinson	35	52.2	91–100	40.2
Baker	27	39.2	81–90	71.9
Brooks	66	33.7	71–80	62.4
Bulloch	80	25.1	41–50	51.3
Burke	84	39.8	81–90	77.2
Calhoun	45	31.7	71–80	79.4
Coffee	78	40.5	91–100	37.6
Decatur	67	33.1	71–80	47.4
Dooly	71	45.7	91–100	65.1
Early	72	41.3	91–100	70.7
Grady	69	42.9	91–100	51.8
Hancock	57	49.8	91–100	84.8
Harris	56	38.0	81–90	71.7
Jefferson	84	44.1	91–100	69.9
Jenkins	29	29.7	61–70	60.5

See footnotes at end of table.

TABLE 7.—*Infant mortality rates in the 10 percent of U.S. counties with lowest level of living index for rural population, 1960* [1]*: United States and 306 Counties, 1956–60*—Continued

[Exclusive of fetal deaths. By place of residence. Rate in number of deaths under 1 year per 1,000 live births.]

Area	Percentile position of number of rural families with income under $3,000 (1959) [2]	Infant mortality rate per 1,000 (1956–60)		Percent of live births, nonwhite 1956–60
		Rate	U.S. percentile group [3]	
Georgia (continued)				
Laurens	87	41.0	91–100	48.1
Macon	51	46.1	91–100	72.7
Marion	28	42.3	91–100	73.8
Meriwether	78	26.3	51–60	63.6
Mitchell	59	49.2	91–100	65.0
Randolph	42	47.2	91–100	74.7
Screven	69	49.7	91–100	67.6
Stewart	44	45.7	91–100	81.9
Sumter	61	42.5	91–100	67.4
Talbot	40	54.4	91–100	82.3
Terrell	47	54.1	91–100	82.6
Tift	77	22.8	31–40	39.7
Warren	43	40.9	91–100	78.2
Washington	73	53.3	91–100	73.7
Worth	77	47.8	91–100	62.7
Kentucky	.....	28.4	.....	8.7
Bell	92	37.4	81–90	3.5
Breathitt	87	33.1	71–80	0.2
Butler	65	34.0	71–80	0.4
Carter	87	23.0	31–40	0.1
Casey	87	34.3	71–80	0.4
Clay	94	25.8	41–50	1.9
Clinton	68	42.7	91–100	0.8
Estill	65	29.4	61–70	0.3
Floyd	99	25.1	41–50	0.5
Grayson	82	25.4	41–50	0.5
Harlan	99	34.2	71–80	7.6
Jackson	76	25.0	41–50	0.2
Johnson	86	35.4	81–90	0.1
Knott	88	26.6	51–60	1.1
Knox	96	35.0	81–90	1.2
Laurel	95	27.9	61–70	0.9
Lawrence	74	36.8	81–90	0.1
Lee	48	34.4	71–80	0.4
Leslie	67	25.6	41–50	0.1
Letcher	95	31.1	71–80	1.7
Lincoln	86	39.8	81–90	5.3
Martin	55	46.0	91–100	0.1
McCreary	76	43.3	91–100	0.2
Morgan	72	32.5	71–80	0.0
Mississippi (continued)				
Leake	92	46.9	91–100	57.4
LeFlore	97	50.4	91–100	77.1
Madison	94	40.6	91–100	83.1
Marion	83	34.2	71–80	42.4
Marshall	89	31.1	71–80	81.2
Monroe	91	30.7	61–70	47.7
Neshoba	88	46.2	91–100	44.3
Noxubee	87	39.5	81–90	83.7
Oktibbeha	79	33.1	71–80	60.7
Panola	98	40.6	91–100	71.8
Pike	92	42.4	91–100	57.5
Quitman	91	48.6	91–100	74.8
Scott	89	44.7	91–100	51.6
Smith	81	29.3	61–70	42.0
Sunflower	99	45.9	91–100	79.3
Tallahatchie	96	54.5	91–100	78.1
Tate	84	34.4	71–80	77.2
Tunica	90	54.8	91–100	88.6
Warren	66	44.9	91–100	54.3
Washington	95	45.3	91–100	60.6
Wilkinson	77	46.9	91–100	79.1
Winston	81	40.3	91–100	54.9
Yalobusha	62	35.8	81–90	64.8
Yazoo	92	48.6	91–100	70.3
Missouri	.....	25.0	.....	13.4
Butler	93	37.0	81–90	9.3
Dunklin	97	33.0	71–80	5.8
Mississippi	64	42.8	91–100	30.7
New Madrid	98	38.7	81–90	27.7
Pemiscot	97	44.1	91–100	35.2
Stoddard	96	29.7	61–70	10.0
New Mexico	.....	35.6	.....	10.2
McKinley	75	57.3	91–100	68.2
Mora	33	64.4	91–100	0.4
Rio Arriba	88	39.2	81–90	9.4
Taos	83	56.0	91–100	6.8
North Carolina	.....	31.7	.....	32.6
Anson	90	42.6	91–100	60.4

Owsley	40	30.8	81–90	0.6
Perry	81	31.8	71–80	3.5
Pike	100	31.3	71–80	0.9
Pulaski	98	32.9	71–80	2.1
Rockcastle	79	26.2	51–60	0.0
Wayne	82	23.1	31–40	2.9
Whitley	92	31.2	71–80	0.4
Wolfe	48	29.5	61–70	0.0
Louisiana	......	32.5	......	39.0
Assumption	80	43.4	91–100	47.1
Avoyelles	98	35.6	81–90	41.1
Bienville	78	42.4	91–100	65.5
Bossier	84	32.4	71–80	27.6
Catahoula	70	29.5	61–70	43.8
Claiborne	72	38.7	81–90	62.8
De Soto	87	34.1	71–80	68.5
East Carroll	50	50.2	91–100	64.9
Evangeline	95	48.6	91–100	37.6
Franklin	94	31.6	71–80	52.2
Iberville	89	34.6	81–90	52.1
Madison	41	48.0	91–100	75.6
Morehouse	84	39.9	81–90	60.3
Natchitoches	95	36.6	81–90	51.4
Point Coupee	87	41.0	91–100	60.5
Red River	66	31.1	71–80	60.4
Richland	87	36.7	81–90	60.3
St. Helena	50	47.6	91–100	72.6
St. Landry	100	39.1	81–90	49.5
St. Martin	90	40.6	91–100	43.2
Tangipahoa	99	34.6	81–90	45.7
Tensas	74	36.8	81–90	73.6
West Carroll	82	35.6	81–90	35.9
Mississippi	......	39.3	......	54.9
Amite	83	47.4	91–100	67.6
Attala	86	43.4	91–100	59.6
Benton	51	39.6	81–90	34.6
Bolivar	100	43.2	91–100	78.4
Calhoun	88	33.3	71–80	47.8
Carroll	73	39.4	81–90	79.2
Chickasaw	75	40.8	91–100	52.5
Choctaw	62	29.6	61–70	49.9
Claiborne	50	52.1	91–100	84.1
Clarke	86	35.3	81–90	53.7
Clay	59	39.4	81–90	59.3
Coahoma	97	47.4	91–100	78.5
Copiah	92	40.5	91–100	67.2
De Soto	92	39.5	81–90	75.8
Grenada	59	47.0	91–100	63.1
Holmes	96	50.4	91–100	83.8
Humphreys	83	50.9	91–100	81.6
Jasper	85	38.2	81–90	69.3
Jefferson	67	41.0	91–100	89.7
Jefferson Davis	79	45.0	91–100	65.0
Kemper	77	26.3	51–60	78.2
Lafayette	74	38.3	81–90	50.9
Beaufort	97	38.5	81–90	48.1
Bertie	95	38.1	81–90	72.3
Bladen	97	40.4	91–100	53.2
Caswell	84	37.0	81–90	58.6
Columbus	100	42.4	91–100	45.1
Duplin	100	39.3	81–90	47.9
Edgecombe	97	35.4	81–90	63.1
Franklin	96	42.0	91–100	61.9
Greene	86	45.9	91–100	64.5
Halifax	99	47.0	91–100	67.8
Hertford	79	37.6	81–90	70.9
Hoke	65	41.8	91–100	71.4
Johnston	100	31.5	71–80	30.4
Jones	60	42.9	91–100	60.9
Lenoir	95	36.7	81–90	46.8
Madison	89	33.7	71–80	0.6
Martin	92	38.4	81–90	60.4
Nash	99	39.7	81–90	50.5
Northampton	34	42.3	91–100	78.4
Pender	88	36.0	81–90	57.8
Person	34	32.5	71–80	45.2
Pitt	99	35.4	81–90	55.3
Robeson	100	43.3	91–100	70.1
Sampson	100	38.6	81–90	48.3
Scotland	77	41.2	91–100	52.3
Vance	85	38.3	81–90	54.7
Warren	89	39.0	81–90	76.5
Wilson	97	35.3	81–90	51.4
Oklahoma	......	25.8	......	13.4
Adair	85	33.5	71–80	43.6
Choctaw	73	31.4	71–80	35.7
McCurtain	94	40.0	81–90	32.0
McIntosh	66	29.7	61–70	36.1
Okfuskee	57	50.9	91–100	36.0
Pushmataha	68	37.8	81–90	18.2
Sequoyah	82	23.7	31–40	15.6
South Carolina	......	33.4	......	43.0
Allendale	47	28.6	61–70	67.1
Bamberg	57	38.3	81–90	67.6
Barnwell	58	31.3	71–80	46.3
Berkeley	96	31.5	71–80	66.0
Calhoun	73	37.0	81–90	81.9
Chesterfield	96	46.8	91–100	44.4
Clarendon	95	42.9	91–100	80.8
Colleton	93	30.5	61–70	59.9
Darlington	98	50.9	91–100	55.0
Dillon	93	43.2	91–100	59.7
Dorchester	85	30.0	61–70	54.7
Edgefield	67	39.6	81–90	72.9
Fairfield	80	33.9	71–80	71.9
Florence	100	46.5	91–100	52.5
Georgetown	81	35.2	81–90	61.1
Hampton	83	36.4	81–90	64.0
Horry	100	35.9	81–90	33.5
Jasper	65	31.4	71–80	70.1

See footnotes at end of table.

TABLE 7.—*Infant mortality rates in the 10 percent of U.S. counties with lowest level of living index for rural population, 1960*[1]*: United States and 306 Counties, 1956-60*—Continued

[Exclusive of fetal deaths. By place of residence. Rate in number of deaths under 1 year per 1,000 live births.]

Area	Percentile position of number of rural families with income under $3,000 (1959)[2]	Infant mortality rate per 1,000 (1956-60)		Percent of live births, nonwhite 1956-60
		Rate	U.S. percentile group[3]	
South Carolina (con.)				
Kershaw	90	36.7	81-90	43.2
Lee	88	39.7	81-90	77.8
Marion	88	38.5	81-90	64.0
Marlboro	91	62.3	91-100	59.0
Orangeburg	100	39.2	81-90	71.0
Williamsburg	99	43.4	91-100	76.0
Tennessee		29.4		21.9
Bledsoe	54	48.6	91-100	2.3
Campbell	93	46.2	91-100	0.8
Claiborne	94	32.4	71-80	2.1
Cocke	90	35.8	81-90	2.9
Cumberland	83	28.4	61-70	0.1
Fayette	97	44.9	91-100	78.8
Fentress	79	43.2	91-100	0.0
Hancock	61	21.4	21-30	0.7
Hardeman	89	35.9	81-90	57.7
Haywood	91	41.8	91-100	76.4
Lake	65	49.0	91-100	29.5
Lauderdale	93	43.9	91-100	51.0
Monroe	89	27.1	51-60	5.0
Overton	80	34.7	81-90	0.8
Scott	82	40.8	91-100	0.1
Tipton	93	36.9	81-90	49.8
Texas		29.4		14.7
Burleson	71	37.0	81-90	37.0
Cameron	97	40.9	91-100	0.5
Falls	87	46.8	91-100	47.4
Freestone	70	29.6	61-70	59.8
Gonzales	73	38.9	81-90	21.0
Grimes	59	27.4	51-60	49.2
Harrison	80	22.2	21-30	49.0
Hidalgo	100	36.2	81-90	0.3
Lee	44	34.8	81-90	37.3
Texas (continued):				
Red River	80	33.0	71-80	33.2
Robertson	71	34.6	81-90	49.0
San Jacinto	43	38.3	81-90	62.6
San Patricio	77	42.4	91-100	2.1
Shelby	87	28.3	61-70	32.1
Starr	69	19.7	11-20	0.1
Washington	78	34.3	71-80	46.3
Wharton	92	28.2	61-70	22.9
Willacy	47	44.5	91-100	0.5
Virginia		30.4		25.5
Brunswick	83	35.3	81-90	69.7
Buchanan	97	40.2	91-100	0.1
Buckingham	62	34.7	81-90	60.3
Dickenson	84	34.1	71-80	1.4
Greensville	55	35.6	81-90	65.0
Halifax	98	32.9	71-80	53.6
Lee	98	40.4	91-100	0.5
Mecklenburg	95	32.7	71-80	57.6
Southampton	88	48.0	91-100	62.4
Tazewell	96	29.4	61-70	4.5
Wise	97	32.9	71-80	2.8
West Virginia		26.3		5.2
Braxton	79	19.9	11-20	0.6
Clay	61	25.6	41-50	0.1
Lincoln	88	31.6	71-80	0.1
McDowell	100	37.4	81-90	22.3
Mingo	96	32.7	71-80	5.0
Webster	74	41.4	91-100	0.1
United States		26.4		15.3

Sources of Data: U.S. Department of Agriculture, Economic Research Service, Economic Development Division, Human Resources Branch.
U.S. Department of Commerce, Bureau of the Census.

(5) A ratio of rural persons under 20 years old and 65 years old and over to rural persons 20 through 64 years old, 1960.

The index of each county is an equally weighted composite of the county ranks in U.S. arrays of counties for each of the five factors. The 10 percent of

U.S. Department of Health, Education, and Welfare: Public Health Service, National Center Health Statistics.

George Washington University, Maternal and Child Health Computer Project (Children's Bureau Program Research Grant, H-133).

[1] The index of level of living of rural population, 1960 is based on five factors as follows:

(1) Number of rural families with less than $3,000 family income, 1959.
(2) Percent of rural families with less than $3,000 family income, 1959.
(3) Percent of rural persons 25 years old and over with less than 7 years schooling completed, 1960.
(4) Percent of occupied rural housing units in deteriorating and dilapidated condition, 1960.

U.S. counties included in the table are those with respective indices in 91–100 percentile positions in the U.S. array of all counties according to the value of the five-factor composite index. The 91–100 percentile positions are occupied by the counties with the largest concentrations of rural population with low income, little schooling, poor housing, and high dependency ratios.

[2] Percentile position of the specified county in the U.S. array of all counties according to number of low income families in rural areas. High percentiles signify relatively large numbers of such families.

[3] The individual county infant mortality rates were ranked in a U.S. array of counties from low to high. Relative position in the array is stated in 10 percentile groups, each including 10 individual positions: 1–10, 11–20, 21–30, 31–40, 41–50, 51–60, 61–70, 71–80, 81–90, 91–100. Relatively high rates are in percentile groups 51–60 and higher.

TABLE 8.—*Number of children, 5 to 17 years, in families (1960) and percent in families with income under $3,000 (1959), by State per capita income groupings (1963–1965): United States and each State*

State per capita income group (1963–65) and State	Children 5–17 years		
	Total number, 1960	In families with income under $3,000, 1959	
		Number	Percent of total
United States	43,117,555	8,025,875	18.6
High (17 States)	20,142,533	2,076,201	10.3
Dist. Columbia	137,050	27,220	19.9
Nevada	64,867	5,630	8.7
Connecticut	574,579	36,771	6.4
Delaware	104,659	12,691	12.1
California	3,627,277	358,247	9.9
New York	3,577,503	374,535	10.5
New Jersey	1,349,850	106,269	7.9
Illinois	2,272,580	256,265	11.3
Alaska	52,211	7,976	15.3
Massachusetts	1,145,199	88,322	7.7
Maryland	751,154	97,228	12.9
Michigan	1,960,772	213,259	10.9
Hawaii	167,501	16,508	9.9
Washington	699,462	62,082	8.9
Rhode Island	188,174	21,734	11.5
Ohio	2,331,304	258,406	11.1
Indiana	1,138,391	133,058	11.7
Middle (17 States)	13,312,808	2,436,851	18.3
Oregon	437,280	42,599	9.7
Pennsylvania	2,586,012	323,070	12.5
Colorado	432,993	59,712	13.8
Wisconsin	970,933	110,329	11.4
Kansas	518,043	73,014	14.1
Missouri	975,603	206,047	21.1
Minnesota	857,131	134,111	15.6
Wyoming	85,467	9,646	11.3
Iowa	672,150	122,306	18.2
New Hampshire	141,188	12,299	8.7
Nebraska	336,352	62,636	18.6
Montana	175,175	25,095	14.3
Arizona	344,150	64,771	18.8
Florida	1,119,563	254,164	22.7
Utah	251,790	21,461	8.5
Virginia	979,760	268,565	27.4
Texas	2,429,218	647,026	26.6
Low (17 States)	9,662,214	3,512,823	36.4
Idaho	183,832	23,720	12.9
Vermont	96,304	15,296	15.9
Oklahoma	561,063	140,979	25.1
Maine	235,542	37,654	16.0
New Mexico	267,173	62,713	23.5
North Dakota	171,035	39,967	23.4
Georgia	1,040,019	379,062	36.4
South Dakota	177,015	47,441	26.8
Louisiana	875,849	309,245	35.3
Kentucky	781,061	281,945	36.1
North Carolina	1,223,129	487,675	39.9
West Virginia	498,477	153,038	30.7
Tennessee	903,112	334,589	37.0
Alabama	885,233	348,908	39.4
Arkansas	467,465	216,432	46.3
South Carolina	679,648	296,556	43.6
Mississippi	616,257	337,603	54.8

SOURCE: U.S. Department of Commerce, Office of Business Economics, Regional Economics Division, Survey of Current Business, August 1966, Bureau of the Census.

on the average about a 45-percent increase in number of physicians (or physician equivalent services) was estimated to sustain comparable volume of services throughout the country.

Needed percentage increases in physicians and their services were greatest in isolated rural counties and in adjacent and isolated semirural counties of the middle and low per capita income groups of States.

Services for Crippled Children

The principal source of Federal grants-in-aid funds for the support of medical services for crippled children is authorized by title V, part 2 of the Social Security Act. The Children's Bureau, Welfare Administration, administers these grants to assist the States to extend and improve, especially in rural areas, services for locating crippled children and for providing medical, surgical, corrective, and other services including diagnosis, hospitalization, and aftercare for children who are crippled or who are suffering from conditions which lead to crippling. The 1965 amendments require the States to extend the program with a view to making these services available to children in all parts of the State by July 1, 1975.

The appropriation requested for 1967 for this program is $50 million. The States are required to match dollar for dollar one-half the amount appropriated; the remainder (except for the amount reserved for special project grants) is not matched and is distributed to the States on the basis of their financial need, as measured largely by per capita income. The large industrial States spend considerably more than is required for matching. The formula for apportioning funds favors rurality since a rural child is counted twice for each urban child.

There is no definition of crippling in the Federal statute, this being determined by the States. The trend is to a broad inclusive definition of crippling to include a wide spectrum of diagnostic conditions which may handicap a child. Diagnostic services are freely available without financial eligibility. All the States apply variable financial eligibility standards for treatment.

Variation in program levels exists among State programs; much of it reflects the financial resources available to the crippled children's agency.

The States use their allotments of Federal funds together with State funds for casefinding, diagnostic clinics, hospitalization, appliances (such as braces, and hearing aids), and aftercare. The physicians who provide clinical services are specialists and they are assisted by public health and other nurses, physical and occupational therapists, medical social workers, speech and hearing therapists, and others. Approximately 35 percent of the expenditures is for hospital care.

The State crippled children's programs continue to show growth in the total number of children

TABLE 9.—*Estimated number of additional M.D.'s to provide in all county groups a physician-population ratio at U.S. average or higher, 1962: United States, State per capita income groups (1961–63), each State, and county group*

[Includes Federal and non-Federal physicians. Fifty States and District of Columbia.]

State per capita income group, 1961–63 and county group [1]	Population [2] (000)	Number of M.D.'s per 100,000 population	Estimated existing number of M.D.'s		M.D.'s additional to raise physician-population ratio to U.S. average (142.9)		
			All specified areas [3]	Areas with ratios below U.S. average [4]	Number [5]	Percent increase over existing number of M.D.'s: All specified areas	Percent increase over existing number of M.D.'s: Areas with ratio below average
United States	184,511	142.9	263,666	96,900	43,839	16.6	45.2
Greater metropolitan	65,791	195.4	128,551	11,260	890	0.7	7.9
Lesser metropolitan	55,431	145.3	80,560	33,963	6,564	8.1	19.3
Adjacent to metropolitan	29,133	85.6	24,949	24,949	16,696	66.9	66.9
Isolated semirural	28,027	94.2	26,400	23,495	14,168	53.7	60.3
Isolated rural	6,130	53.0	3,246	3,233	5,521	170.1	170.8
High per capita income group (17)	91,266	168.8	154,077	39,641	12,387	8.0	31.2
Greater metropolitan	51,110	203.7	104,124	10,337	606	0.6	5.9
Lesser metropolitan	22,817	146.8	33,498	13,021	3,394	10.1	26.1
Adjacent to metropolitan	10,491	98.9	10,373	10,373	4,631	44.6	44.6
Isolated semirural	5,921	94.4	5,592	5,433	2,917	52.2	53.7
Isolated rural	927	52.9	490	477	839	171.2	175.9
Middle per capita income group (17)	52,576	127.4	66,986	33,947	13,214	19.7	38.9
Greater metropolitan	12,793	170.3	21,781	17	24	0.1	141.2
Lesser metropolitan	18,872	135.8	25,622	17,093	2,426	9.5	14.2
Adjacent to metropolitan	9,905	86.6	8,580	8,580	5,574	65.0	65.0
Isolated semirural	9,355	107.0	10,008	7,262	3,826	38.2	52.7
Isolated rural	1,651	60.3	995	955	1,364	137.1	137.1
Low per capita income group (17)	40,668	104.9	42,643	23,312	18,238	42.5	78.2
Greater metropolitan	1,888	140.1	2,646	906	260	9.8	28.7
Lesser metropolitan	13,742	156.0	21,440	3,849	744	3.5	19.3
Adjacent to metropolitan	8,737	68.6	5,996	5,996	6,491	108.3	108.3
Isolated semirural	12,751	84.7	10,800	10,800	7,425	68.8	68.8
Isolated rural	3,550	49.6	1,761	1,761	3,318	188.4	188.4

Sources of data: Pennell, Maryland Y., and Baker, Kathryn L.: Health Manpower Source Book No. 19, Location of Manpower in Eight Health Occupations, 1962. Public Health Service Publication No. 263. Public Health Service, U.S. Department of Health, Education, and Welfare. U.S. Department of Commerce, Survey of Current Business, 1961–63.

[1] County groups are defined as follows: the counties that constitute the Standard Metropolitan Statistical Areas with populations of 1 million or more inhabitants have been called the "greater metropolitan"; the counties that constitute the SMSA's with populations between 50,000 and 1,000,000 are "lesser metropolitan"; counties contiguous to the SMSA counties are called "adjacent," although they may be sparsely populated, they are nevertheless relatively close to metropolitan areas and the health facilities ordinarily available in such centers. All other counties have been called isolated—"isolated semi-rural" if they contain at least one incorporated place of 2,500 or more persons; otherwise, "isolated rural."

[2] As of January 1, 1962. Items may not add to totals due to independent rounding.

[3] U.S. estimate is based on population, 1962, and corresponding physician-population ratio of 142.9. For per capita income groups and county group totals, numbers are summations of State estimates.

[4] For each State, the total number is the sum of respective estimates for the county groups having physician-population ratios lower than 142.9 per 100,000 population.

[5] State totals are summations of estimates made for individual county groups where the existing number of M.D.'s in the county group was less than expected, assuming the U.S. average physician-population ratio, 142.9 per 100,000 population (1962), prevailed. The difference between "expected" and "existing" number was used as the needed number to be added in the county group in question.

served as well as in the rate per 1,000 population under 21 years of age served. More than 423,000 handicapped children received services under the program in 1964, 7 percent more than the number served in 1963. In 1964, the program reached 5.4 children in each 1,000 children under 21 in the population, or twice the rate for 1937. The rate of children served in nonmetropolitan counties was 7.1

per 1,000 child population; in metropolitan counties it was 3.9.

Approximately 45 percent of the children had an orthopedic diagnosis; children with cerebral palsy constituted over 8 percent, hearing problems about 7 percent, vision problems over 6 percent, congenital heart disease 6 percent. As in previous years, congenital malformations represented the largest single diagnostic category of children served by crippled children's agencies: roughly 30 percent of the total.

The rapid rise in numbers of children with congenital heart defects in the crippled children's program is an illustration of the responsiveness of the public to effective diagnostic and treatment services made possible by research. In 1950, the number of children with congenital heart defects in crippled children's programs was 2,200; by 1963, it had increased to 25,000.

The costs of the crippled children's programs are greatly influenced by the costs of medical care. About 35 percent of the expenditures in this program are for hospital care. The medical care consumer price index has risen each year since 1940, from 50.3 to 127.0 in 1966 (second quarter). The average cost per patient day for hospital care has also risen sharply, from $9.39 in 1946 to over $44 in 1965. These increases result not only from generally rising costs but also because research has provided many new methods of diagnosis and treatment and these are technically complex and expensive.

The costs of the crippled children's programs will increase markedly beginning July 1, 1967, as a result of the 1965 Social Security Amendments, which include a provision that inpatient hospital services provided under the State plan must be paid at "reasonable" cost.

Mental Retardation Programs

Services for mentally retarded children under the maternal and child health and crippled children's programs have expanded rapidly since Congress earmarked $1 million of the 1957 maternal and child health appropriation for mental retardation. In fiscal year 1966, $4,750,000 of maternal and child health (title V, part 1) and $3,750,000 of crippled children's funds were earmarked by the Congress to be used only for special projects for mentally retarded children. These funds represent the principal source of money for the support of children's mental retardation clinics and related services. State agencies and medical schools use these funds to establish clinical services for the diagnosis, evaluation, and followup care of mentally retarded children by a multidiscipline team. Parent counseling is an important component of service. A number of the medical center mental retardation clinics have developed community satellite clinics in neighboring towns. By the end of fiscal year 1966, the Children's Bureau was supporting, in whole or part, 134 mental retardation clinics, showing how rapidly this program has grown since 1955 when the Children's Bureau began to support mental retardation clinics. Last year these clinics served over 30,000 children. These funds also support the testing of newborn infants for Phenylketonuria, a metabolic disorder leading to severe mental retardation unless properly treated early in infancy. Two years ago, 4 States had legislation concerning testing for PKU; now 32 States have such legislation, with organized programs for confirming the diagnosis and providing the essential dietary treatment and continuing close supervision.

There is an upsurge of interest in various genetic diseases. Because of the rapid advances being made in biochemistry and cytogenetics, indications for such laboratory services, as a part of the total evaluation of a child, are increasing. Children who have certain kinds of mental retardation, who have congenital defects or multiple handicaps are likely candidates for biochemical or chromosomal analyses.

Thirteen genetics laboratories in medical schools are receiving special project grants in the amount of $975,000 from the Children's Bureau. All of these have a close affiliation with clinical services for mentally retarded or handicapped children.

The children given care in both the crippled children's program and the mental retardation clinics present to an increasing degree complex handicaps, especially multiple handicaps. As a result there is a trend toward the development of special centers for children with multiple handicaps. At the end of fiscal year 1966, the Children's Bureau was supporting service projects for the care of these children in 12 medical centers at a cost of over $2 million. Further impetus to the development of centers for children with multiple handicaps was provided by one of the 1965 Medicare amendments. P.L. 89-97 amended title V, part 2, of the Social Security Act, to authorize grants to nonprofit institutions of higher learning for training professional personnel for health and related care of crippled children, particularly mentally retarded children and children with multiple handicaps. For the fiscal year 1967, $5 million was authorized. Progress in the development of special programs for children with multiple handicaps requires that professional personnel have the opportunity to obtain additional training in this field. Although these centers are in urban hospitals affiliated with medical schools, they serve rural as well as urban children.

New Programs for Mothers and Children

In recent years there has been an increasing emphasis on the problems of large cities and some of the new health legislation is to a considerable extent focused on the poor who live in these cities. However, the child population in rural areas is also benefiting from maternal and child health amendments enacted in 1963 and 1965.

Some overall problems related to progress in improving the public health include the following:

- increasing population.
- differences in birth rates and fertility rates between low income and middle income groups.
- rapidly growing problems of large cities.
- necessity for devising better patterns of organizing and providing comprehensive medical care services.
- technical and industrial progress with resulting health hazards from air pollution, water pollution, new drugs, insecticides, food additives.
- continuing increase in costs of medical care.
- differences in the quality of care received by low income and middle class individuals.
- recognition that professional personnel will continue to be scarce during the next 10 years and that we must concentrate on how to use them most economically for the good of all.
- gaps between knowledge we now have for prevention and treatment and its application to all segments of the population.
- continuing increase in specialization which creates difficulties in communication and in achieving coordinated programs.

In the period since World War II, there has been a massive movement of the population from rural areas to urban, and from the cities to the suburbs, greatly increasing the proportion of low income families in the cities and leading to the present urbanization of the Negro population, three-fourths of whom are now living in cities.

Most of these overall problems are closely interrelated. Programs of broad preventive health services and medical care for mothers and children administered by the Children's Bureau will be discussed to illustrate some of the current measures being taken in response to these problems.

Although many years have passed since the infant mortality rate was recognized as a useful index of social progress, its value continues to be affirmed in this period of great social change.

The 1964 national infant mortality rate of 24.8 per 1,000 live births was only 5 percent lower than in 1960 when it was 26. The range among the States was considerable, the lowest being 19.8 and the highest 39.4.

The highest infant mortality rates are now found in the most rural areas and in cities of 500,000 or more.

In the 21 largest cities, only 3 showed significant reductions in infant mortality in 1964 as compared with 1960-62. This is a reflection of the rapidly increasing proportion of low income families in the cities.

It is the low income families that have the most babies at frequent intervals, with high premature delivery rates (by birth weight) and the greatest frequency of complications of pregnancy. There is a high correlation between birth rate, prematurity rate, infant mortality rate, and income.

High infant mortality rates are associated with low income, limited education of the mother, inadequate health supervision, complications of pregnancy which occur much more frequently in low income groups, illegitimacy, previous maternal history of stillbirth or premature delivery, and short interval between pregnancies. These contributing factors are found much more often in low income families than in middle class families.

In 1962, the President's Panel on Mental Retardation pointed out that thousands of women of low income, especially those in the clinics of our cities, were giving birth prematurely, from 2 to 2½ times the expected rate; that low birth weight babies were likely to have brain damage; that these women had excessive rates of complications of pregnancy; that between one-fourth and one-half of women in low income families in our large cities delivered having had late or no prenatal care. The women for whom pregnancy was accompanied by complications much in excess of the expected and who therefore needed good care were receiving poor care in crowded, understaffed hospitals. Obviously something was wrong with our system of providing medical services. The President's Panel recommended that a new program of maternity and infant care focused on high-risk patients be established in order to help reduce the incidence of mental retardation caused by complications associated with childbearing.

The 1963 amendments to title V of the Social Security Act authorizing the maternity and infant care projects are now in the fourth year of a 5-year authorization. The appropriation for the fiscal year 1967 was $30 million. Since funds for the maternity and infant care projects became available early in 1964, we have approved 54 projects. Programs are in operation in rural areas as well as in the congested slums of our largest cities. Ten of these serve predominantly rural areas, 10 the nation's largest cities, and the rest smaller cities and combinations of urban and rural areas.

For example, one of the Florida projects is administered by the Department of Obstetrics of the University of Florida at Gainesville under an agreement with the State Board of Health and serves 13 rural counties in that area. The assumption of responsibility for rural comprehensive community maternal and child health services by the medical school in this State, as in several other States with large rural areas, in partnership with the health department, is of the greatest significance for the future development of organized medical care programs for mothers and children. For the first time, poor women in these rural counties are receiving medical and hospital care of outstanding quality instead of being delivered by untrained granny midwives.

In the administration of these programs, our objectives include reducing maternal and infant mortality and morbidity and taking steps which will assist communities in so organizing their maternity and infant care services as to improve the quality of care and to make use of the best available resources in providing care for these patients.

Project funds are used to meet the costs of prenatal and post-partum clinics, hospitalization, part-time or full-time salaries or fees of physicians, salaries of public health nurses, medical social workers, nutritionists, aids of various kinds, family planning, health education, and various other services. Particular attention is given to working with neighborhood churches, stores, schools, etc., in developing active casefinding procedures in order to reach out to the population served, decentralizing clinics into neighborhoods, making the clinics friendly and receptive, identifying patients with more serious problems, and providing care in voluntary hospitals.

In the first 9 months of this fiscal year, almost 60,245 women were delivered under the maternity and infant care projects and 37,500 were admitted to family planning services.

This program has introduced thousands of women of low income and limited education to family planning services for the first time.

A concept of medical care that is being introduced into these projects is that of interconceptional care. This can be of great significance for this population group with its high rate of complications of pregnancy and related factors which are associated with increased hazard to the infant, many of which persist following the post-partum period. This is described by Gold:[2]

> . . . Thus, we have discarded the traditional single post-partum maternal visit and submitted interconceptional visits six times during the first post-partum year.
>
> What do we offer and accomplish at these interconceptional visits? . . . At each visit she (the mother) is seen by the same physician, conference nurse, nutritionist, and when indicated, by the social worker. Medically, any physical, psychological, or emotional deficits are looked for. Her cardio-vascular-renal status is observed. Anemia and metabolic deficiencies are corrected. Gynecologic and endocrine abnormalities are treated. Consultations with other specialists are implemented when needed. The nutritionist continues dietary education, not only for mother and infant, but also for the family. The underweight and overweight patient is placed on an appropriate dietary regimen. Most important, family planning services are offered, instituted, and followed up; changes in contraceptive methodology are made and family life education is stressed. Oftentimes, the social, emotional, domestic, and financial difficulties of the family come to light during these interconceptional visits because of the continuity and rapport established between the patient and her own doctor, public health nurse, nutritionist, or social worker.

The effects of such continuing maternal health supervision on future pregnancies among women with histories of complications of pregnancies are under study.

A second major new program was authorized by the 1965 amendments to title V of the Social Security Act, a program of project grants to meet up to 75 percent of the costs of providing comprehensive health services for children and youth in low income areas. The appropriation for this, the second year of a 5-year authorization, is $35 million.

Fifty-five projects have been approved, with State or local administration divided almost equally between health departments and medical schools. Each project is administered by a project director who is a pediatrician assisted by a core staff which represents nutrition, nursing, medical social work, and other fields. Ten of these projects serve rural or semirural areas.

For example, the University of Virginia project serves not only Charlottesville but nine surrounding rural counties. According to the Washington Post, December 15, 1966:

> The familiar picture is one of a rosy-cheeked farm child—breathing fresh country air, drinking plenty of milk and brimming with good health.
>
> But behind the picture postcard image are thousands of rural youngsters who may never see a doctor or dentist, never get the immunization that middle-class society takes for granted or never have a speech or hearing defect corrected before it permanently cripples.
>
> Living in remote areas, they are largely hidden from the glare of public concern. And as an urban America concentrates more on urban problems, including the sick children of the city slums, they are likely to sink even further from notice—unless or until they move, with their impaired health, to the city.
>
> Moreover, there is little to keep or to attract bright young people into rural medicine, particularly in poor, sparsely populated areas.
>
> To help stem this tide, the University of Virginia pediatrics department, under a $574,000 Federal grant, is working on improved ways of bringing comprehensive health care to the young rural poor.
>
> Directly benefiting from this project will be at least 20,000 children and youths in nine rural counties surrounding the University's Charlottesville campus.
>
> One county of about 11,000 people has only one doctor. The median family income in some communities is below $3000 annually. Scores of children are known as 'emergency room medical orphans,' their contact with medicine limited to sudden crises or nighttime emergency room visits when a neighbor's car is available.
>
> The University has offered clinic services to children from the surrounding area for some time. Now, in addition to children coming to Charlottesville, the University will go to the children.
>
> For instance, if examinations at a local school show up many hearing defects, a hearing clinic, staffed by both local people and personnel from a University 'core' group, will be set up at the local health department headquarters. Or a child screened locally may be brought to the University for more intensive care.
>
> Transportation problems present some of the biggest headaches. Even to get to a clinic requires money for bus fare and there may be no money at home and no bus for miles around.

This program represents some major departures from most other public health programs. There is no artificial separation maintained here between preventive services and treatment, nor, as is still the case in some crippled children's programs, are the services to be limited to children who fall into certain diagnostic categories. On the contrary, in the geographic area—whether school district or census tract to be served by this program—all of the problems that are presented by these children are to be taken care of by the program, either through direct services or an appropriate referral to other sources which are prepared to provide at least equivalent services. Both medical and dental care must be included for children of school age; also children with emotional as well as physical health problems are to be accepted. The projects therefore will attempt to meet the medical needs of a given child population in a specified area. Of necessity, there will have to be an emphasis on reaching out into the community for early casefinding and preventive health services among a population mostly acquainted only with care in emergencies.

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[2] Proceedings, American Medical Association Conference on Infant Mortality, August 12, 13, 1966.

These two programs are especially needed in areas where there are many people of low income and where there are few physicians in private practice, a situation that has become so characteristic of the slum areas of large cities and which has always been true of rural areas. These programs are bringing organized community health services to the people and creating new patterns of delivering comprehensive care. Some cities and counties are finding that a working partnership between health departments and medical schools is effective in bringing the skills and resources of both to the solution of the problems.

These two project grant programs are an expression of the fact that there are health and related social problems of low income families which can best be met by concentrating available funds in the form of project grants to support organized comprehensive health services. Both the maternity and infant care projects and the 1965 amendments providing for comprehensive health services for children and youth are programs designed to meet the health problems of certain population groups in specific areas.

The response on the part of low income families to the services provided by such programs contradicts the frequently held impression that they are indifferent to good services. On the contrary, too often it has been the kind of services that were available to them that discourages their use; overcrowded public clinics, waiting 5 or 6 hours to receive impersonal attention, all tend to discourage people from attendance at such clinics. At the same time, the great crowding at these clinics is evidence of their response to medical services. The enormous increase in patient visits to emergency rooms is also a testimony to the failure of society in our large cities to develop resources adequately responsive to the great changes in the composition of the population in these cities.

This, then is a major challenge which must be met, namely, the improvement in the effectiveness in the delivery of health services by changes in the organization of local health services. We can anticipate an acceleration in the trend toward group practice—both private and public—for the provision of public health and medical care services with the objective of providing closer integration of specialized services not only within Medicine itself but also with the necessary social services. Such integration includes not only the necessity for the several health professions to acquire a better understanding of one another's contributions to meeting the health and related social problems but also a bringing together of the services of health and social agencies physically such as in Neighborhood Centers so as to increase their availability to the population to be served. The Model Cities programs, the Neighborhood Health Centers of the Office of Economic Opportunity, and the programs of the Children's Bureau are directing their available resources toward the goal of well-integrated decentralized services.

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(3) U.S. Department of Agriculture, Human Resources Branch, Economic Research Service. Table entitled: U.S. counties ranked according to percentile of five factor index of relative economic status of their rural population and the percentile rank of counties for specified individual indicators of relative economic status of their rural population.

(4) Pennell, M. Y., and Baker, K. I. *Location of Manpower in 8 Health Occupations, 1962, Health Manpower Source Book Section 19.* Public Health Service, Publication number 263. U.S. Department of Health, Education, and Welfare, 1965.

Chapter 20

Rural-Urban Fertility Differentials in the United States in 1960

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Introduction

The life styles, norms, and values of subgroups in American society have lost and are continuing to lose much of their distinctiveness. Due to rapid urbanization, elaborate communication systems, high rates of mobility, and widespread affluence, the behavior and aspirations of most Americans are incorporated in common norms. In the words of Ryder *(7)*: [1] "There is . . . overwhelming evidence that the American people are converging gradually on a common identity. It deserves emphasis that in every case this is a convergence upward, so to speak, by the progressive elimination of the very poor, the very ignorant, the very unhealthy, and indeed all those who deviate from the norm in ways that are undesirable."

While one cannot deny that the trends indicated are correct, the rural areas of the nation contain large percentages of disadvantaged. Relatively larger proportions of rural people deviate from the norm with respect to income, education, and the institutional prerequisites for full participation in the mainstream.

The evidence is clear that fertility behavior in the United States is converging upon a common norm. Group differences in fertility have either disappeared or have decreased markedly.[2] Those that remain are related primarily to religion, race, or farm background *(6)*. In a recent analysis it has been shown that the 2- to 4-child range has encompassed the ideals of about 80 to 90 percent of American men and women since the midthirties *(2)*.

This paper examines the level of fertility of the rural population of the United States in 1960 and the attributes associated with fertility levels. Two major questions are asked: First, do rural segments of the American population continue to manifest higher fertility levels than the urban in 1960, and if so, what is the magnitude of the differences? Second, what variables account for differences in the fertility levels of the rural population?

The Data

The data used in this analysis derive from the Census of Population of the United States in 1960. The measure of fertility, unless otherwise noted, is the number of children ever born per 1,000 ever married women.[3] This measure was computed separately for married women 15 to 24, 25 to 34, and 35 to 44 and for the entire cohort of married women 15 to 44 years of age. Fertility measures then were obtained for white women in rural farm, rural nonfarm, and urban residence categories,[4] by region and division of conterminous United States in 1960. Comparable ratios were obtained for nonwhite married women in the South and its constituent divisions.

This measure of fertility is not to be regarded as "current fertility" since the age range for women bearing children is from 15 to 44. A large proportion of the children ever born to women 35 to 44 in

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Published with the approval of the Director of the Michigan Agricultural Experiment Station as Journal Article No. 4195.

[1] Italic numbers in parentheses indicate references listed at the end of this paper.

[2] Freedman *(3)* suggests three plausible explanations for the contraction of group differences in fertility. These are: (1) the use of contraception has spread through all strata, thus virtually eliminating the differential use of contraception as a basis of group differences; (2) the inverse relation between status and fertility of the past may have been due to the recent rural origin of lower status groups. While farm to urban migration will continue, those with farm backgrounds can have little numerical significance in the future; and (3) the contraction in differentials is due to a blurring of class differences, with all major segments possessing similar norms and functions.

[3] The data are based upon a 25-percent sample (unless otherwise noted) and derive from the following question: "If this is a woman who has ever been married—how many babies has she ever had, not counting stillbirths? Do not count her stepchildren or adopted children."

[4] Urban, rural nonfarm, and rural farm residence categories were used as defined by the Bureau of the Census in 1960. The rural farm definition in 1960 differs markedly from previous definitions. The rural farm population in 1960 consisted of persons living in rural territory or places of 10 acres or more from which sales of farm products amounted to $50 or more in 1959 or on places of less than 10 acres from which the sales of farm products amounted to $250 or more in 1959. The rural nonfarm population is a heterogeneous residual population which remains after urban and rural farm populations are delineated.

1960 would have been born between 1935 and 1945. For this cohort of married women in 1960 childbearing would have been relatively complete. Children ever born to women 15 to 24 in 1960, on the other hand, would have been born in the 1950's. For this cohort childbearing would have been incomplete.

The data for children ever born are considered complete and accurate, especially for whites. Undoubtedly some overreporting as well as underreporting occurred in the collection of the data (*4*).

Rural-Urban Fertility Differentials in 1960

The United States

The fertility data for 1960 exhibit rural-urban differences of considerable magnitude. The level of fertility for the total white population of the United States is higher in each of the rural residence categories than in the urban for all ages of married women. Rural farm married white women aged 15 to 44 reported approximately one-third more children than urban women at these ages. Rural nonfarm married white women in the same age cohort reported about one-sixth more children than comparable urban women. The average number of children ever born to married white women aged 15 to 44 in 1960, by residence, is: rural farm, 2.8; rural nonfarm, 2.5; and urban, 2.1. The comparable averages for white women for whom childbearing is nearly complete (those 35 to 44) are: 3.3, 2.9, and 2.4, respectively (table 1).

Divisions

The higher rural than urban fertility rate is true of white women at all ages in each of the nine divisions and for nonwhite women in the three divisions of the South. Rural farm fertility rates are generally considerably above rural nonfarm rates. For white women aged 15 to 44, the ratio of rural farm to urban fertility level ranges from 28 percent higher in the Mountain States to 38 percent higher in the Middle Atlantic States. The comparable rural nonfarm versus urban difference ranges from 9 percent higher in New England to 24 percent higher in the East South Central States. The higher rural than urban fertility levels among nonwhites is very marked, ranging from 33 to 70 percent (table 2).

Within the rural residence categories, the level of fertility exhibits some variation. The average number of children ever born to rural farm white women aged 15 to 44 ranges from a low of 2.7 in the South Atlantic division to 3.0 in the Mountain division. Comparable averages for rural farm nonwhite women in the Southern divisions are 4.3 and 4.7. Similarly, the average number of children ever born to rural nonfarm white women ranges from a low of 2.3 in the South Atlantic States to 2.7 in the Mountain division. Rural nonfarm nonwhite women average 3.6 to 3.9 children in the Southern divisions (table 9 in the appendix).

The fertility of white women residing in both rural categories is high in the Mountain States. The highest fertility rates among whites in the nation are found among rural farm and rural nonfarm women, at each age, residing in the Mountain division. White rural farm women residing in the South Atlantic States report the lowest fertility rates. Low rates also characterize rural nonfarm white women in this division.

Metropolitan and Nonmetropolitan Status

In an effort to control for relative urbanity, the population of the United States and each of the divisions was separated by metropolitan and nonmetropolitan status. Metropolitan counties, those having one or more cities of 50,000 or more, were aggregated to represent highly urbanized environments. Nonmetropolitan counties, those without such large centers, were aggregated to represent more rural environments. Within each, the population was separated by residence category. As shown in table 3, the fertility rate for white women in each residence group and for all ages was higher in nonmetropolitan than in metropolitan areas. The differences, while consistently in the expected direc-

TABLE 1.—*Children ever born per 1,000 ever married white women, by age of woman and residence, conterminous United States, 1960*

Age of woman	Fertility rate by residence			Ratio of rural farm to urban fertility rate	Ratio of rural nonfarm to urban fertility rate
	Rural farm	Rural nonfarm	Urban		
Total, 15 to 44	2,849	2,469	2,132	1.34	1.16
15 to 24	1,405	1,370	1,175	1.20	1.17
25 to 34	2,867	2,591	2,269	1.26	1.14
35 to 44	3,262	2,903	2,408	1.35	1.21

Source: U.S. Bureau of the Census, U.S. Census of Population 1960, *General Social and Economic Characteristics*, PC(1)C, U.S. Government Printing Office, Washington, D.C. The data used here emerge from additional programing of items contained on the original Census tapes.

TABLE 2.—*Ratio of rural farm and of rural nonfarm to urban fertility rates: Children ever born per 1,000 ever married white women (and nonwhite women in the South), by age of woman and residence, divisions of conterminous United States, 1960*

Color of women, and geographic division	Ratio of rural farm to urban fertility rate				Ratio of rural nonfarm to urban fertility rate			
	Women 15–44	Women 15–24	Women 25–34	Women 35–44	Women 15–44	Women 15–24	Women 25–34	Women 35–44
White:								
New England	1.34	1.30	1.33	1.32	1.09	1.15	1.10	1.09
Middle Atlantic	1.38	1.31	1.35	1.41	1.16	1.24	1.17	1.17
East North Central	1.31	1.18	1.25	1.31	1.14	1.18	1.14	1.17
West North Central	1.30	1.21	1.23	1.28	1.15	1.15	1.14	1.18
South Atlantic	1.35	1.14	1.22	1.41	1.18	1.17	1.14	1.25
East South Central	1.36	1.16	1.23	1.40	1.24	1.19	1.18	1.33
West South Central	1.29	1.21	1.19	1.27	1.19	1.17	1.15	1.23
Mountain	1.28	1.21	1.21	1.26	1.15	1.16	1.13	1.18
Pacific	1.32	1.23	1.26	1.30	1.18	1.19	1.18	1.21
Nonwhite:								
South Atlantic	1.65	1.11	1.49	1.97	1.36	1.12	1.29	1.52
East South Central	1.61	1.13	1.52	1.86	1.33	1.11	1.30	1.50
West South Central	1.70	1.22	1.55	1.96	1.40	1.14	1.34	1.54

Source: See source note, table 1.

tion, were not large. In most divisions of the nation, the fertility level of urban nonmetropolitan residents exhibited a greater excess over urban metropolitan residents than did the rural nonmetropolitan categories over their counterparts.

The fertility rate was consistently higher for rural women residing in nonmetropolitan than in metropolitan parts of each of the divisions. Higher fertility for all ages of rural farm white women residents of nonmetropolitan than metropolitan areas was true for all divisions, except women 15 to 24 in the South Atlantic States and for women 15 to 24 and 25 to 34 in the Mountain States. The same pattern held for rural farm nonwhite women in the Southern divisions. The one exception in which metropolitan nonwhite women had higher fertility than nonmetropolitan applied to the age group 15 to 24 in the South Atlantic States. Much the same pattern of higher fertility among rural nonfarm women, white and nonwhite, was true of those residing in nonmetropolitan rather than metropolitan areas (tables 10 and 11 in the appendix).

Urbanized Areas as a Norm

The relationship between the number of children ever born to ever married women in the rural residence categories as compared to those in urbanized areas[5] of the nation is shown in table 4. Among the inferences to be drawn from the data of table 4, the following are important: (1) The fertility levels of farm and rural nonfarm women are consistently higher than those of urbanized area women at all ages, both whites and nonwhites; (2) the rural urban differential has diminished over time; and

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[5] An urbanized area includes a central city or cities of 50,000 or more population and the urban fringe. The areas around these large cities are included if they meet criteria relating to population density or land use.

TABLE 3.—*Children ever born per 1,000 ever married white women, by age of woman and residence, metropolitan and nonmetropolitan State economic areas, conterminous United States, 1960*

Age of woman	Fertility rate by metropolitan status and residence						Ratio of nonmetropolitan to metropolitan fertility rate		
	Nonmetropolitan			Metropolitan					
	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban
Total, 15 to 44	2,860	2,509	2,237	2,849	2,469	2,132	1.03	1.05	1.06
15 to 24	1,406	1,376	1,209	1,399	1,355	1,164	1.01	1.02	1.04
25 to 34	2,874	2,632	2,410	2,818	2,503	2,230	1.02	1.05	1.08
35 to 44	3,283	2,997	2,607	3,113	2,708	2,357	1.05	1.11	1.11

Source: See source note, table 1.

TABLE 4.—*Ratio of rural to urbanized area fertility rates: Children ever born per 1,000 ever married women, by age, color, and residence, conterminous United States, 1960*

Age of woman	Ratio of rural to respective urbanized area fertility rate [1]					
	Rural farm			Rural nonfarm		
	Both	White	Nonwhite	Both	White	Nonwhite
Total, all ages	1.49	1.45	1.96	1.30	1.27	1.59
15 to 44	1.41	1.36	1.85	1.19	1.17	1.48
15 to 19	1.10	1.10	1.07	1.03	1.09	1.01
20 to 24	1.29	1.28	1.38	1.20	1.23	1.23
25 to 29	1.28	1.27	1.50	1.17	1.18	1.33
30 to 34	1.34	1.28	1.82	1.17	1.15	1.49
35 to 39	1.41	1.34	2.08	1.23	1.21	1.63
40 to 44	1.52	1.44	2.38	1.31	1.27	1.84
45 to 49	1.61	1.53	2.42	1.39	1.35	1.86
50 to 54	1.65	1.60	2.28	1.46	1.43	1.80
55 to 59	1.63	1.60	2.05	1.47	1.45	1.71
60 to 64	1.55	1.51	2.00	1.43	1.41	1.64
65 and over	1.47	1.44	1.68	1.35	1.34	1.50

Source: U.S. Census of Population: 1960. Final Report PC(2)-3A, *Women by Number of Children Ever Born* table 1 (5 percent sample).

[1] Ratio of each rural subcategory to its urbanized area counterpart.

(3) nonwhite rural-urban differentials remain very large and they have lagged behind the change shown for whites.

The number of children ever born per 1,000 ever married rural farm white women of all ages is about 45 percent higher than that for urbanized area women. Nonwhite rural farm women have a fertility ratio 96 percent higher than that for nonwhite urbanized area women. The relationship between rural nonfarm and urbanized area fertility is in the same direction but of lesser magnitude: 27 percent for whites and 59 percent for nonwhites.

Among whites the rural-urban differential has generally diminished over time. Rural white married women for whom childbearing is complete exhibit much larger ratios than comparable urbanized area women. For white women still in the childbearing ages the differences are more modest. Rural nonwhite women, on the other hand, continue to bear much larger numbers of children than their urbanized area counterparts.

Occupation, Education, and Income

In an effort to control for rural occupation in addition to mere residence category, the fertility of women whose husbands were agriculturally employed is compared with that of women whose husbands were employed in urbanized areas (table 5). Regardless of rural farm or rural nonfarm residence, the fertility of white women at all ages whose husbands were "farm laborers and farm foremen" was consistently higher than for those whose husbands were "farmers and farm managers." For the nonwhite women, however, the occupational category of the husband made little difference in the level of fertility.

In relation to women whose husbands were employed in urbanized areas, the fertility of women at all ages whose husbands had agricultural occupations was markedly higher. The fertility of white women residing in rural farm territory and whose husbands were farmers or farm managers was 11 to 38 percent higher than that of women whose husbands were nonagriculturally employed. If husbands were employed as farm laborers and farm foremen but otherwise similar, the fertility of white women ranged from 2 to 78 percent higher than comparable women whose husbands were employed in urbanized areas. Among nonwhite women residing in rural farm territory and whose husbands were agriculturally employed, fertility ranged from 6 to 99 percent above that for women whose husbands were employed outside of agriculture in urbanized areas. Fertility differentials were in the same direction but of smaller magnitude for those with rural nonfarm residence (table 5).

The influence of education and income of agriculturally employed husband and the age of wife at marriage on fertility levels is shown in table 6. A general inverse relationship between fertility and the education and income level of agriculturally employed husbands is evident among the white population. While many cells are not filled, the same association appears to be true among nonwhites.

A later age at marriage for the wife should reduce fertility levels and this is the case for both white and nonwhite women with agriculturally employed husbands. Marriage at age 14 to 21 rather than at 22 or over increases fertility by 30 percent among nonwhites. The increases are greatest among low education and income groups (table 12 in the appendix).

TABLE 5.—*Ratio of fertility rates: Employed husbands having agricultural occupations to all employed urbanized area husbands. Children ever born per 1,000 ever married women 15 years old and over and husband present, by major occupation of employed husband and residence, conterminous United States, 1960*

Age of woman	Ratio of fertility rates: Husbands with rural occupation to employed husbands in urbanized areas[1]							
	Rural farm				Rural nonfarm			
	White		Nonwhite		White		Nonwhite	
	Farmers and farm managers	Farm laborers and farm foremen	Farmers and farm managers	Farm laborers and farm foremen	Farmers and farm managers	Farm laborers and farm foremen	Farmers and farm managers	Farm laborers and farm foremen
15 to 19	1.11	1.02	1.06	1.12	1.01	1.09	......	1.04
20 to 24	1.12	1.20	1.32	1.34	1.08	1.22	1.44	1.29
25 to 29	1.16	1.30	1.47	1.44	1.10	1.34	1.38	1.43
30 to 34	1.20	1.43	1.64	1.75	1.10	1.42	1.36	1.71
35 to 39	1.24	1.54	1.83	1.92	1.21	1.56	1.84	1.60
40 to 44	1.32	1.64	1.99	1.95	1.29	1.67	1.90	1.73
45 to 49	1.38	1.78	1.99	1.92	1.37	1.86	1.76	1.69
50 and over	1.27	1.70	1.82	1.61	1.49	1.78	1.76	1.59

Source: U.S. Census of Population: 1960. Final Report PC(2)–3A, *Women by Number of Children Ever Born*, tables 31 and 32 (5 percent sample).

[1] Rates of each rural subcategory to its urbanized area counterpart.

TABLE 6.—*Ratio of fertility rates: Specified age and income level to the total; children ever born per 1,000 mothers 35 to 44 and 45 to 54, married once, by age at marriage to agriculturally employed husband (husband present) by education, income, and color, conterminous United States, 1960*

Occupation, education, and income of husband	Ratio of fertility rates: Specified category to total							
	White women 35 to 44		White women 45 to 54		Nonwhite women 35 to 44		Nonwhite women 45 to 54	
	Married at age 14 to 21	Married at age 22 and over	Married at age 14 to 21	Married at age 22 and over	Married at age 14 to 21	Married at age 22 and over	Married at age 14 to 21	Married at age 22 and over
All farmers, farm managers, farm laborers and farm foremen	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
No high school	1.10	1.07	1.07	1.07	1.03	1.09	1.00	1.02
$1–$1,999 or less	1.13	1.05	1.10	1.05	1.04	1.11	1.01	1.04
$2,000–$3,999	1.09	1.07	1.09	1.06	1.02	.93	1.04	.96
$4,000–$6,999	1.07	1.12	.97	1.09	.....	.....	.....	.....
$7,000–$9,999	1.00	1.12	.99	1.11	.....	.....	.....	.....
$10,000 and over	1.07	1.03	.95	1.05	.....	.....	.....	.....
High school (1–4 yrs)	.88	.94	.85	.91	.77	.74	.99	.77
$1–$1,999 or less	.85	.86	.85	.87	.....	.....	.....	.....
$2,000–$3,999	.87	.92	.85	.90	.....	.....	.....	.....
$4,000–$6,999	.91	1.02	.84	.93	.....	.....	.....	.....
$7,000–$9,999	.85	.93	.81	.99	.....	.....	.....	.....
$10,000 and over	.86	.97	.79	.91	.....	.....	.....	.....
College (1 or more years)	.85	.95	.77	.88	.....	.....	.....	.....
$1–$1,999 or less	.83	.93	.77	.92	.....	.....	.....	.....
$2,000–$3,999	.86	.93	.77	.88	.....	.....	.....	.....
$4,000–$6,999	.90	.96	.80	.92	.....	.....	.....	.....
$7,000–$9,999	.80	.97	.....	.73	.....	.....	.....	.....
$10,000 and over	.79	.95	.73	.86	.....	.....	.....	.....

Source: U.S. Census of Population: 1960. Final Report PC(2)–3A, *Women by Number of Children Ever Born*, tables 39 and 40 (5 percent sample).

Variations in Rural Fertility

We now consider variations in fertility and the factors responsible for variation in the rural farm and rural nonfarm segments of the population. As a part of the monograph "Rural America," a regression analysis was carried out in which the fertility rate (number of children ever born per 1,000 married women 15 to 44) of each rural residence component was used as the dependent variable [(5); see also (1)]. Nine independent variables representing socioeconomic and demographic and ecological attributes were used. The rural farm and rural nonfarm residence components of the county were the units of observation. Separate regression analyses were made of the rural farm white populations of the United States and each of the four regions. Parallel regression analyses were made of the rural nonfarm white population. In addition, two regression analyses were made for nonwhites in the South, one for the rural farm and another for the rural nonfarm population.

On the basis of previous studies of differential fertility [see, for example, (4, 8)], each of the nine variables used was considered related to variations in birth rates. These nine independent variables are: median number of school years completed by males and females 25 years old and over; median family income; percentage of females 14 and over employed; median personal income of females; percentage of farmers and farm managers; percentage of farm laborers and farm foremen; percentage of ever-married women 15 to 44 who were aged 15 to 24, and 25 to 34; and proximity and size of nearest Standard Metropolitan Statistical Area (SMSA).

It was anticipated that each of the socioeconomic characteristics (except farmers and farm managers) would be negatively related to fertility level in the rural farm and rural nonfarm populations. Previous work had made it clear that as social status (reflected by educational level, income, employment in low ranking jobs, and female employment) rises, fertility levels tend to be lowered. While rural-urban differentials have diminished over time, it was expected that the proportion of farmers and farm managers in the two rural population segments would be associated with high fertility. Since childbearing increases during the first part of the childbearing span and then declines, two age groups of married women were inserted into the equations. It was expected that the proportion of females 15 to 24 would be negatively associated with fertility level while the proportion aged 25 to 34 would be mildly positively related to fertility rate. It was expected that fertility rates of rural women would rise with increasing distance from a metropolitan area. Each county component of the rural population was assigned a value which incorporated the influence of size of an SMSA together with the distance from it. It is assumed that increasing distance is a barrier to rural-urban interaction and that lags may occur in the acceptance of dominant norms.

The nine variables used in the 10 regional analyses explained a moderately large proportion of the variance, ranging from about one-fifth to one-third. Generally the variance explained was approximately the same for the two rural components and for whites and nonwhites.

Tables 7 and 8 summarize the direction and level of significance of the relationship between the nine independent variables and fertility rates in the nation and regions. With the exception of the percentage of farmers and farm managers, the relationship of the other independent variables to fertility were generally in the expected direction.

TABLE 7.—*Summary of relationship between selected characteristics and fertility level of the rural farm population by region and color, conterminous United States, 1960*

Selected characteristic	Direction and significance of relationship with fertility rates					
	Whites					Nonwhites
	United States	Northeast	North Central	South	West	South
Socioeconomic:						
Education	−	−*	−	−	−*	−
Family income	+	−	+*	−	−	−
Female employment	−*	+*	+	−	−*	−*
Female income	−	−	−	+*	−	−*
Farmers and farm managers	−	−*	−	−	−	−*
Farm laborers and foremen	+	+	+	+	+*	−*
Demographic and ecological:						
Females aged 15 to 24	−	−	−	−	−	−
Females aged 25 to 34	+	−*	+	+*	−*	−
Proximity to SMSA and size	−	−	−	−	−	−*

* = nonsignificant at the .05 level.

TABLE 8.—*Summary of relationship between selected characteristics and fertility level of the rural nonfarm population by region and color, conterminous United States, 1960*

Selected characteristic	Direction and significance of relationship with fertility rates					
	Whites					Nonwhites
	United States	Northeast	North Central	South	West	South
Socioeconomic:						
Education	−	+*	−	−	−	−
Family income	+	−	−*	−	−	−
Female employment	−	−	+	−	−	−
Female income	−*	−*	−	+*	−*	−
Farmers and farm managers	−*	−*	−	−	+	+
Farm laborers and foremen	+	−	+*	+	+*	+*
Demographic and ecological:						
Females aged 15 to 24	−	−*	−	−	−	−
Females aged 25 to 34	+	−*	+	+	+*	−
Proximity to SMSA and size	−	−	−	−	−	−*

* = nonsignificant at the .05 level.

Four independent variables were generally most important in accounting for variation in fertility levels. In approximate order of relative importance in most of the analyses, these are: (1) proximity to nearest SMSA and its size; (2) median number of school years completed by males and females 25 years old and over; (3) percentage of married women of childbearing age who were 15 to 24 years of age; and (4) percentage of farm laborers and farm foremen.

The proximity variable was negatively related to fertility in each of the analyses and was significant in all instances except for nonwhites in the South. These results suggest that even today, with effective means of transportation and communication, a kind of isolation exists for rural farm as well as rural nonfarm people. It also suggests that rural nonwhites in the South, regardless of residence, are not fully incorporated into the life emanating from the urban centers.

As expected, the educational level of the adult population in rural areas bears a strong negative association with the fertility level. In each of the analyses, the relationship was negative (except for rural nonfarm whites in the Northeast) and was significant (except for both rural components in the Northeast and for rural farm whites in the West).

The proportion of married women 15 to 24 years of age, as a fraction of all women in the childbearing ages, is negatively related to number of children ever born in each of the residence and color categories. It is not significant, however, for rural nonfarm white women in the Northeast. These results are not surprising since relatively few families are completed for women in this age range.

The proportion of farm laborers and farm foremen, as anticipated, is positively associated with fertility level. Two exceptions were found: rural farm nonwhites in the South, but the relationship was not significant; and rural nonfarm whites in the Northeast, and the relationship was statistically significant. While it was anticipated that this low status category in American agriculture would be positively related to fertility level, it was not anticipated that the proportions of farmers and farm managers would be negatively related to the fertility rate. The negative relationship was true for each rural farm category but was not significant among rural farm whites in the West and among rural farm nonwhites in the South. Surprisingly, the negative relationship characterized all rural nonfarm groups except whites in the West and nonwhites in the South. Neither relationship, however, was statistically significant.

While the family income and the employment and income of female variables were usually in the expected direction, they did not often contribute heavily to the explanation of variations in the fertility rate. As shown in tables 7 and 8, family income is generally negatively associated with fertility at the regional level in the rural farm and rural nonfarm populations. In the North Central States family income in the rural farm population is positively associated (but not significant) with fertility. In the same region the income measure for the rural nonfarm population is negative but not significant. The positive relationship at the national level among rural farm and rural nonfarm whites is probably spurious and may arise from interregional diversity.

Except in the South, the income of females is consistently negatively associated with fertility level. In the rural farm population, this relationship is positive for whites and negative for nonwhites but neither is statistically significant. In the rural nonfarm population, the relationship between female income and fertility is again positive among southern whites. It is negative and nonsignificant at the national level and in the Northeast and West regions.

The employment of females, as anticipated, is generally negative, although the relationship is not often significant in the rural farm population. In the rural nonfarm population, however, the relationship between female employment and fertility level is negative and significant in all categories except whites in the North Central region. In this instance the relationship is positive and significant.

Summary and Implications

This study of fertility behavior shows that rural women as of 1960 were still bearing considerably more children than urban women. The magnitude of this difference, however, is diminishing. Nonwhites residing in rural areas were continuing to have very large families and the rural-urban differential was much greater than for whites. White women in all residence categories of the Mountain States possess high fertility in relation to those in other divisions. The presence of a large city serves to depress fertility rates in all residence categories.

Fertility rates in both segments of the rural population are inversely related to proximity and size of large cities, educational level, income measures, employment of women, and proportions of farmers and farm managers. On the other hand, fertility levels are directly related to the proportion of farm laborers and farm foremen in rural populations.

These findings suggest that the rural population is deprived, as measured against urban patterns and norms in a dominantly urbanized society. The overall importance of location in relation to fertility levels of rural people suggests that this variable helps to determine interaction, communication, and participation in the urban-industrial system. It implies that local institutional services become less adequate as one moves from large metropolitan areas into the hinterland.

The findings seem to point clearly to a cluster of characteristics shared by the lower socioeconomic groups in American agriculture in accounting for rural-urban fertility differentials. Low educational level, low income, little opportunity for the employment of women, and the proportion of farm laborers are all associated with high fertility. These groups, the results suggest, remain outside the mainstream of American life.

Perhaps the most interesting finding in this study shows that the proportion of farmers and farm managers is negatively related to fertility level. It suggests that many of those farmers and farm managers who remain in American agriculture have made a more or less satisfactory adaptation to social and structural changes in American society. It indicates that the fertility of this occupational group tends to conform to urban norms while the more depressed group of farm laborers and farm foremen has not. Without question, the more stringent definitions applied in 1960 to delineate the rural farm population has served to upgrade this residence category and at the same time allocated many small and part-time farmers and multiple job holders to the rural nonfarm category.

In many respects this analysis of fertility behavior mirrors the special needs of the rural population. Implied in these findings is the need to correct educational and income disparities and to upgrade institutional services of all types in rural areas. Groups which emerge as most disadvantaged are the farm laborers across the nation, the nonwhites in the South, and those rural people living most distant from the large cities.

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Appendix

TABLE 9.—*Children ever born per 1,000 ever married white women (and nonwhite women in the South) by rural farm, rural nonfarm, and urban residence and age of women, divisions of conterminous United States, 1960*

Color of women and geographic division	Fertility ratio by residence and age of woman											
	Rural farm				Rural nonfarm				Urban			
	Total, 15–44	15–24	25–34	35–44	Total, 15–44	15–24	25–34	35–44	Total, 15–44	15–24	25–34	35–44
White women:												
Conterminous U.S.	2,849	1,405	2,867	3,262	2,169	1,370	2,591	2,903	2,132	1,175	2,269	2,409
New England	2,934	1,506	2,995	3,266	2,399	1,328	2,486	2,696	2,195	1,156	2,260	2,481
Middle Atlantic	2,814	1,413	2,816	3,211	2,350	1,331	2,428	2,665	2,032	1,081	2,084	2,274
East North Central	2,898	1,430	2,937	3,254	2,521	1,430	2,673	2,915	2,205	1,213	2,354	2,484
West North Central	2,921	1,458	2,973	3,293	2,578	1,383	2,756	3,031	2,240	1,203	2,425	2,578
South Atlantic	2,682	1,240	2,598	3,208	2,339	1,269	2,429	2,854	1,985	1,083	2,122	2,278
East South Central	2,779	1,295	2,687	3,360	2,520	1,331	2,585	3,183	2,038	1,119	2,186	2,401
West South Central	2,840	1,485	2,866	3,223	2,603	1,429	2,756	3,116	2,195	1,224	2,400	2,537
Mountain	3,045	1,580	3,127	3,473	2,737	1,526	2,906	3,251	2,387	1,310	2,580	2,760
Pacific	2,784	1,520	2,904	3,023	2,502	1,469	2,703	2,821	2,117	1,233	2,298	2,330
Nonwhite women:												
South Atlantic	4,349	2,022	4,288	5,462	3,570	2,035	3,703	4,225	2,630	1,823	2,871	2,772
East South Central	4,678	2,139	4,804	5,823	3,867	2,088	4,103	4,698	2,902	1,886	3,166	3,128
West South Central	4,737	2,213	4,696	5,977	3,900	2,085	4,075	4,710	2,790	1,821	3,038	3,054

Source: See source note, text table 1.

TABLE 10.—*Children ever born per 1,000 ever married white women (and nonwhite women in the South), by residence, and age; and by metropolitan and nonmetropolitan State economic areas (SEA's), divisions of conterminous United States, 1960*

Color, geographic division, and age	Fertility ratio by metropolitan status and residence					
	Nonmetropolitan SEA's			Metropolitan SEA's		
	Rural farm	Rural nonfarm	Urban	Rural farm	Rural nonfarm	Urban
WHITE						
United States:						
Women 15 to 44	2,860	2,509	2,237	2,773	2,383	2,103
Women 15 to 24	1,406	1,376	1,209	1,399	1,355	1,164
Women 25 to 34	2,874	2,632	2,410	2,818	2,503	2,230
Women 35 to 44	3,283	2,997	2,607	3,113	2,708	2,357
New England:						
Women 15 to 44	3,010	2,454	2,258	2,718	2,345	2,184
Women 15 to 24	1,533	1,375	1,238	1,419	1,262	1,138
Women 25 to 34	3,008	2,583	2,386	2,781	2,394	2,238
Women 35 to 44	3,376	2,811	2,616	2,973	2,596	2,461
Middle Atlantic:						
Women 15 to 44	2,837	2,401	2,158	2,776	2,300	2,017
Women 15 to 24	1,442	1,370	1,151	1,361	1,292	1,071
Women 25 to 34	2,872	2,487	2,260	2,725	2,369	2,062
Women 35 to 44	3,226	2,747	2,421	3,186	2,586	2,256
East North Central:						
Women 15 to 44	2,911	2,540	2,292	2,829	2,471	2,182
Women 15 to 24	1,439	1,437	1,242	1,376	1,414	1,204
Women 25 to 34	2,943	2,693	2,467	2,902	2,632	2,325
Women 35 to 44	3,271	2,978	2,650	3,156	2,790	2,443
West North Central:						
Women 15 to 44	2,925	2,590	2,306	2,846	2,518	2,201
Women 15 to 24	1,460	1,365	1,202	1,417	1,477	1,204
Women 25 to 34	2,977	2,771	2,509	2,875	2,698	2,377
Women 35 to 44	3,302	3,060	2,712	3,136	2,880	2,502
South Atlantic:						
Women 15 to 44	2,692	2,365	2,018	2,591	2,263	1,973
Women 15 to 24	1,236	1,270	1,089	1,272	1,269	1,090
Women 25 to 34	2,600	2,443	2,155	2,583	2,387	2,110
Women 35 to 44	3,234	2,924	2,388	2,973	2,654	2,238
East South Central:						
Women 15 to 44	2,782	2,547	2,044	2,720	2,396	2,034
Women 15 to 24	1,301	1,329	1,105	1,175	1,341	1,130
Women 25 to 34	2,687	2,605	2,193	2,683	2,498	2,182
Women 35 to 44	3,368	3,256	2,468	3,214	2,851	2,357
West South Central:						
Women 15 to 44	2,853	2,638	2,306	2,714	2,466	2,139
Women 15 to 24	1,480	1,427	1,254	1,451	1,437	1,210
Women 25 to 34	2,874	2,787	2,521	2,792	2,644	2,341
Women 35 to 44	3,241	3,176	2,737	3,039	2,865	2,480
Mountain:						
Women 15 to 44	3,047	2,782	2,478	3,032	2,536	2,323
Women 15 to 24	1,571	1,542	1,341	1,664	1,451	1,285
Women 25 to 34	3,119	2,957	2,698	3,226	2,687	2,505
Women 35 to 44	3,473	3,313	2,922	3,465	2,973	2,651
Pacific:						
Women 15 to 44	2,793	2,533	2,307	2,764	2,462	2,092
Women 15 to 24	1,504	1,493	1,310	1,552	1,437	1,221
Women 25 to 34	2,910	2,746	2,515	2,802	2,647	2,270
Women 35 to 44	3,037	2,856	2,614	2,965	2,775	2,295
NONWHITE						
South Atlantic:						
Women 15 to 44	4,358	3,605	2,904	4,180	3,398	2,532
Women 15 to 24	2,019	2,031	1,871	2,080	2,052	1,806
Women 25 to 34	4,300	3,734	3,127	4,035	3,553	2,782
Women 35 to 44	5,483	4,285	3,168	5,103	3,933	2,626
East South Central:						
Women 15 to 44	4,689	3,889	3,106	4,515	3,734	2,786
Women 15 to 24	2,160	2,100	1,906	1,802	2,014	1,875
Women 25 to 34	4,823	4,130	3,362	4,507	3,942	3,061
Women 35 to 44	5,835	4,729	3,457	5,663	4,509	2,937
West South Central:						
Women 15 to 44	4,771	3,937	3,137	4,184	3,649	2,653
Women 15 to 24	2,259	2,084	1,916	1,571	2,096	1,783
Women 25 to 34	4,702	4,108	3,343	4,601	3,872	2,923
Women 35 to 44	6,009	4,765	3,578	5,319	4,301	2,835

Source: See source note, text table 1.

TABLE 11.—*Ratio of nonmetropolitan to metropolitan fertility levels: Number of children ever born per 1,000 married white women (and nonwhite women in the South), by age and divisions of conterminous United States, 1960*

Color, geographic division, and residence	Ratio of nonmetropolitan to metropolitan			
	Women aged 15 to 44	Women aged 15 to 24	Women aged 25 to 34	Women aged 35 to 44
WHITE				
New England:				
Rural farm	1.11	1.08	1.10	1.14
Rural nonfarm	1.05	1.09	1.08	1.08
Urban	1.03	1.09	1.07	1.06
Middle Atlantic:				
Rural farm	1.02	1.06	1.05	1.03
Rural nonfarm	1.04	1.06	1.05	1.06
Urban	1.07	1.08	1.10	1.07
East North Central:				
Rural farm	1.03	1.05	1.01	1.04
Rural nonfarm	1.02	1.02	1.02	1.07
Urban	1.05	1.03	1.06	1.08
West North Central:				
Rural farm	1.03	1.03	1.04	1.05
Rural nonfarm	1.03	.92	1.03	1.06
Urban	1.05	1.00	1.06	1.08
South Atlantic:				
Rural farm	1.04	.97	1.01	1.09
Rural nonfarm	1.05	1.00	1.02	1.10
Urban	1.02	1.01	1.02	1.07
East South Central:				
Rural farm	1.02	1.11	1.00	1.05
Rural nonfarm	1.06	.99	1.04	1.14
Urban	1.00	.98	1.00	1.05
West South Central:				
Rural farm	1.05	1.03	1.03	1.07
Rural nonfarm	1.07	.99	1.05	1.11
Urban	1.08	1.03	1.08	1.12
Mountain:				
Rural farm	1.00	.94	.97	1.00
Rural nonfarm	1.10	1.06	1.10	1.11
Urban	1.07	1.04	1.07	1.10
Pacific:				
Rural farm	1.01	.97	1.01	1.01
Rural nonfarm	1.03	1.04	1.04	1.03
Urban	1.10	1.07	1.11	1.14
NONWHITE				
South Atlantic:				
Rural farm	1.04	.97	1.07	1.07
Rural nonfarm	1.06	.99	1.05	1.09
Urban	1.15	1.04	1.12	1.21
East South Central:				
Rural farm	1.04	1.20	1.07	1.03
Rural nonfarm	1.04	1.04	1.05	1.05
Urban	1.11	1.02	1.10	1.18
West South Central:				
Rural farm	1.14	1.44	1.02	1.13
Rural nonfarm	1.08	.99	1.06	1.11
Urban	1.18	1.07	1.14	1.26

Source: See source note, text table 1.

TABLE 12.—*Number of children ever born per 1,000 women 35 to 44 and 45 to 54 years old, married once and husband present, by age of wife when married and education and income of agriculturally employed husband, conterminous United States, 1960*

Occupation, education, and income of husband	Children ever born per 1,000 mothers, husband present							
	White women 35 to 44		White women 45 to 54		Nonwhite women 35 to 44		Nonwhite women 45 to 54	
	Married at age 14 to 21	Married at age 22 and over	Married at age 14 to 21	Married at age 22 and over	Married at age 14 to 21	Married at age 22 and over	Married at age 14 to 21	Married at age 22 and over
All farmers, farm managers, farm laborers and farm foremen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4,946
No high school	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5,059
$1–$1,999 or loss	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	5,126
$2,000–$3,999	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4,738
$4,000–$6,999	[illegible]	[illegible]	[illegible]	[illegible]				
$7,000–$9,999	[illegible]	[illegible]	[illegible]	[illegible]				
$10,000 and over	[illegible]	[illegible]	[illegible]	[illegible]				...
High school (1–4 years)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3,804
$1–$1,999 or loss	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
$2,000–$3,999	[illegible]	[illegible]	[illegible]	[illegible]				
$4,000–$6,999	[illegible]	[illegible]	[illegible]	[illegible]				...
$7,000–$9,999	[illegible]	[illegible]	[illegible]	[illegible]				...
$10,000 and over	[illegible]	[illegible]	[illegible]	[illegible]				...
College (1 or more years)	[illegible]	[illegible]	[illegible]	[illegible]				...
$1–$1,999 or loss	[illegible]	[illegible]	[illegible]	[illegible]				...
$2,000–$3,999	[illegible]	[illegible]	[illegible]	[illegible]				...
$4,000–$6,999	[illegible]	[illegible]	[illegible]	[illegible]				...
$7,000–$9,999	[illegible]	[illegible]		[illegible]				...
$10,000 and over	[illegible]	[illegible]	[illegible]	[illegible]				...

Source: U.S. Census of Population: 1960. Final Report PC(2)-3A, *Women by Number of Children Ever Born*, tables 29 and 30 (5 percent sample).

Chapter 21

Family Planning and Rural Poverty: An Approach to Programing of Services

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Introduction

The extension of medically competent, voluntary family planning services to all Americans who need and want them became a national goal in 1966 when President Johnson stated:

> We have a growing concern to foster the integrity of the family and the opportunity for each child. It is essential that all families have access to information and services that will allow freedom to choose the number and spacing of their children within the dictates of individual conscience.

Achievement of this goal is entirely feasible in the next several years if sufficient financial resources are made available to support the needed services and if official health agencies, private physicians, and voluntary institutions are stimulated to provide them. Fertility studies and pilot service programs demonstrate that—

(1) Poor couples, in rural and urban areas, want small families.

(2) In the last decade, they have increasingly adopted family planning and experimented with various contraceptive techniques.

(3) They continue to have more children than they want, largely because they lack access to continuing medical care and must depend more on the least effective, nonmedical methods of fertility control.

(4) Their response to the few organized programs making available the best modern medical methods—oral contraceptives and intrauterine devices (IUD's)—has been considerable.

In rural America, the historic cultural "lag" in fertility values has largely been eliminated, doubtless as a byproduct of increased mechanization of agriculture, contraction of employment opportunities, greater mobility, decreased isolation, and related basic social changes.

The conditions thus exist for an energetic program to provide the poor with equal opportunity to share in the increased control over fertility which modern contraceptive technology makes possible. Yet family planning programs to date have had scant attention from health professionals—and even scantier allocations of public funds. Even in urban communities organized programs are grossly inadequate; in most rural areas they do not yet exist. Implementation in rural areas is made more difficult, of course, by serious deficiencies in the health services infrastructure. As the few existing rural programs demonstrate, however, these deficiencies can in part be overcome with dedication and proper organization. The fact that family planning is relatively simple to deliver makes it plausible to provide this service *now*, even in areas where the delivery of more complex health care may still be problematic.

The challenge to public policy is to marshal the financial resources and professional energies needed to make modern family planning services realistically available and accessible to the poor. This is not likely to be accomplished anywhere—in rural *or* urban areas—unless family planning receives much higher priority in Federal health programing and budgeting than it now is accorded.

The evidence is clear that the main ingredient lacking is not disinterest on the part of the potential recipients of family planning services, but lack of adequate program development. All of American society has a stake in the resolution of this issue, but it is a matter of direct urgency to the 34 million persons living in poverty—and to the 15 million children growing up poor. Family planning is a medical service which has both important health and important social consequences. Studies by the Department of Health, Education, and Welfare have shown that it is the most cost-effective health measure available to reduce infant mortality *(34)*,[1] while the Office of Economic Opportunity has concluded that it is the most cost-effective program available to reduce poverty *(18)*.

For the poor, the critical importance of family planning is revealed in Orshansky's *(27)* analyses which show that nearly half of the children living in poverty are growing up in homes with five or more children under 18, and that the risk of poverty increases rapidly from 10 percent for one-child families to 47 percent for families with six or more children (table 1). Indeed, nearly one-third of all

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

TABLE 1.—*Risk of poverty by size of family, 1964*

Children (number)	All U. S. families	The poor		Poor and near poor	
		Number	Percent of all families	Number	Percent of all families
	Thousands	*Thousands*		*Thousands*	
1	8,898	920	10.3	1,550	17.4
2	8,339	943	11.2	1,507	17.9
3	5,437	913	16.7	1,343	24.6
Total	22,674	2,776	12.2	4,400	19.4
4	2,832	639	22.4	973	34.1
5	1,455	514	34.3	753	50.4
6 or more	1,315	621	46.9	816	61.6
Total	5,602	1,774	31.7	2,542	45.4

Source: Orshansky (*27, table 2*).

families with four or more children were living in poverty in 1964, and nearly half were either poor or near poor. Their risk of poverty was almost three times as great as for families with three children or less.

Approximately 5.3 million fertile medically dependent women are not, at any given time, pregnant or seeking a desired pregnancy and thus constitute the minimum estimated potential patient load for tax-supported family planning services. Only 700,000 currently receive them from all public and private agencies combined.

This is the context in which the prospects for family planning for the rural poor must be viewed. More than half of the couples in need of subsidized family planning services are located in the 110 Standard Metropolitan Statistical Areas with populations of 250,000 or more, while rural America, with 29 percent of the population, accounts for 43 percent of the nation's poverty and 37 percent of the family planning need. As with other services, family planning programs are less well developed in rural communities than in the cities.

In a recent address, Esser reported the results of a survey by the North Carolina Fund which showed that many commonly held ideas about the rural poor are myths (*7*). He particularly cited the notion that the rural poor want large families because they regard children as additional labor power. Most respondents, he said, viewed "large families as a liability."

The response of poor rural residents to the few organized family planning programs which have been available to them likewise belies the myth. As the reports prepared for the National Advisory Commission on Rural Poverty (*14*) demonstrate, the rural poor appear to be as interested in modern fertility control as the urban poor. These programs confirm the consistently expressed preference of impoverished parents for small families.

A critical issue of government policy is whether to encourage the continued migration of rural residents to the cities or to attempt to develop a viable economy which would enable more families to remain in rural areas. Regardless of which policy ultimately prevails, it should be clear that family planning is an essential, high priority component of any program aimed at rural poverty: Large numbers of children are no longer needed as farmhands—or wanted by most parents—and they are certainly no asset to the family which moves to the city.

This paper summarizes what is known of the fertility attitudes and practices of the rural poor, and of their response to organized family planning programs. The need for family planning in rural areas is estimated and the prospects for developing services are examined in the context of existing rural health resources. Finally, the capabilities of a variety of agencies for delivering services as part of a coordinated program are explored, and an assessment is presented of alternative proposals for Federal programs in terms of their potential impact on rural area services.

The Convergence of Fertility Values

Family Size Preferences

Esser's observations reveal something of the tenacity of middle- and upper-class myths about the poor.[2] For it was clear more than a decade ago that many of the historic fertility differentials were rapidly disappearing, particularly the traditional differences between higher and lower socioeconomic status, and urban and rural Americans. By the time the 1955 Growth of American Families (GAF) Study was conducted, the evidence documented, for both lower status and rural parents, an "increasing preference for moderate sized families implemented by their increasingly extensive and successful use of contraception" (*8, p. 318*). A differential remained, to be sure, but it was hardly of an order to justify the persistent notion that the rural poor desire families of 8 to 10 children because they don't care how many children they have or view them as economic assets. In 1955, farm wives expected to have an average of 3.7 children, about 0.7 of a child more than all wives.

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[2] He suggests that myths are *more* tenacious about the rural than the urban poor but the same basic myths are implicit in much upper-class thinking about programs for all poor, whether rural or urban. For discussions of how these myths have distorted thinking about family planning programs, see Stycos (*30*); Jaffe (*12, 15, 16*); and Jaffe and Hill (*17*).

By the 1960 Growth of American Families Study, the differential had narrowed further: Farm wives wanted an average of 3.5 children, only 0.2 more than all wives, and expected to have this number. Wives living in rural nonfarm areas had exactly the same family size desires and expectations as all wives, and the remaining rural-urban difference in expected family size was smaller among younger farm wives under 30 than among those aged 30 to 39 (*36, pp. 117–119*).

By 1960, then, most rural couples were included among the 83 to 88 percent of U.S. couples who wanted families of 4 children or less (*36, p. 38, table 15*). This consensus, and particularly the clustering of desired family size in the 2- to 4-child range, included all subgroups in American society—economic, geographic, educational, and color. Within this consensus, lower income couples wanted smaller families than higher income couples and nonwhite couples wanted smaller families than whites. Nonwhite wives wanted 2.9 children compared to 3.3 for white wives, and this relationship held for all subclassifications by region and education, except three: For wives with only a grade school education and those living in the South as a whole, nonwhites and whites wanted the same number of children (3.5 and 3.0, respectively), while nonwhites living on southern farms wanted 3.8 children compared to 3.1 for whites. It is indicative of the potential for rapid change that nonwhite couples with no previous southern farm residence were not significantly different from white couples in either past or expected numbers of births. "By the time nonwhite couples are one generation or more removed from the rural South, their fertility is very much like that of the white population," the authors stated (*36, p. 350, table 189; p. 342*).

These results of national sample surveys are confirmed in local investigations of rural attitudes. A 1962 study conducted by the Florida State Board of Health among public health maternity patients revealed that more than 70 percent of the respondents, whose median number of living children was 2.9, stated that they wanted no more, while most of the remainder wanted to wait at least 2 years before having another baby; as in the 1960 GAF study, Negro respondents consistently expressed a desire to have fewer additional children than whites (*4*). A 1965 survey in Lincoln Parish, La., showed that among all respondents, whites desired an average of 2.9 children while nonwhites desired 3.1. Only older couples above age 35, at both ends of the class ladder—upper socioeconomic status whites and lower socioeconomic status nonwhites—wanted more; among lower socioeconomic status nonwhites below age 34, the average number of children desired was 2.5, even though this was less than the number they already had.[3]

Family Planning Practices

In view of this convergence of fertility values, it is not surprising that use of contraception increased most between 1955 and 1960 among couples in the lowest socioeconomic groups. The proportion of users of all forms of birth control among grade school graduates increased from 49 percent in 1955 to 66 percent in 1960. This and other findings suggest strongly that significant increases in contraceptive use occurred during this 5-year period among the poor in both urban and rural areas. For example, use among couples with incomes of less than $3,000 increased from 59 to 70 percent; among those living on farms, from 62 to 84 percent; and among those living in rural nonfarm areas, from 67 to 84 percent.

These percentages measure the combined use of all methods of fertility control, including methods which required medical prescription and were relatively reliable (e.g., diaphragm) and those which did not require medical advice and were less reliable (e.g., douche, suppositories, and withdrawal). While the use of birth control increased considerably in the lower socioeconomic groups between 1955 and 1960, there remained significant differences in employment of the most effective methods. Among white Protestants, for example, half as many wives with a grade school education used the diaphragm as college graduates, and twice as many grade school wives relied on withdrawal (*36, p. 281*). Class differences were similarly pronounced for nonwhites: Twice as many nonwhites as whites relied on the douche and three times as many relied on suppositories. These methods, the authors point out, can be used "without medical advice, which is generally less available to nonwhite than to white wives" (*36, p. 361 and table 196*).

This factor of differential access to medical services in family planning is significant on two grounds: First, it undoubtedly influenced the ability of low income and nonwhite couples to limit their families to the number of children wanted; and second, the new methods introduced since 1960 (oral contraceptives and intrauterine devices) are methods which require even more medical supervision than conventional techniques and have generally proven very acceptable to the poor when they have been made available to them

Unwanted Fertility

In 1960, 21 percent of couples in farm occupations were classified in the "excess fertility" category because they said that their last child was unwanted either by the wife, the husband, or both, compared to 17 percent of all white couples (*36, p. 273, table 155*). These overall measures obscure the fact that excess fertility is considerably more severe among the poor. Among couples with excess fertility, those with incomes below $3,000 expected more children than those with incomes above $10,000 (4.2 vs. 3.9), although they wanted fewer (2.5 vs. 3.1). Only 11 percent of the college-educated group fell into the excess fertility category, compared to 32 percent in the grade school group. Of all nonwhite couples, 31 percent were in the excess fertility category, while the proportion rose to 48 percent for nonwhites living on southern farms. Most of the difference in expected family size between higher and lower status couples was explained by the higher prevalence of severe excess fertility (*36, pp. 242–243; tables 131, 137, 197*). The authors concluded (*pp. 243, 246*):

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[3] Unpublished data from The Lincoln Parish Fertility and Family Planning Project, cited through the courtesy of Dr. Joseph Beasley and Dr. Carl Harter of Tulane University School of Medicine.

> Lower status couples do not have more children than higher status couples simply because they want more. They have more because some of them do not use contraception regularly and effectively. If couples in all education and income groups were to use contraception equally well, there would be only small differences in average family size. . . . If the wife has a grade school education and the husband has an income of less than $4,000 per year, then 39 percent have excess fertility. . . . The judgment that their fertility is too high represents their own opinion.

The Rapidity of Change Since 1960

Published reports from the 1965 National Fertility Study have documented the major impact of the oral contraceptive on U.S. family planning practices. By 1965, 6.4 million couples had already used the pill which, in less than 5 years, emerged as the single most popular contraceptive method, particularly among younger couples (*28*). The use of all methods of fertility control continued to increase between 1960 and 1965 most markedly among those who previously had the lowest rates of reported use—nonwhites, Catholics, and younger women (*35*).

Unpublished preliminary data from the 1965 study, cross-tabulated by income, rurality, and age, and made available through the courtesy of Professors Westoff and Ryder, make possible for the first time a direct evaluation of the fertility attitudes and practices of the rural poor. Selected findings for couples now living on farms and those who never lived on farms (omitting couples with previous farm residence) are presented in table 2. They demonstrate that the convergence of fertility values already implicit in the 1955 and 1960 studies is continuing and intensifying.

Most striking is the evidence that younger, poor farm couples have substantially the same family size desires and interest in practicing family planning as other younger couples regardless of farm residence or income. Within the poverty group, farm couples with wives under 30 want roughly the same number of children as younger urban couples and have used or expect to use contraception in approximately the same proportion.

The rapid rate of change is graphically demonstrated in the comparisons between couples with wives under age 30 and those with wives between 30 and 44. In the farm group under 30 with incomes below $4,000, the desired number of children is 3.2, an average of one child less than for the poor farm group aged 30 to 44; this is also true for younger farm wives with incomes between $4,000 and $5,999 and a similar difference, though to a lesser extent, is evident between younger and older city poor. These differences between groups separated in age by only half a generation appear significant, even allowing for the propensity of older couples retroactively to rationalize the number of children they originally wanted.

In a similar manner, a higher proportion of younger farm poor than of those aged 30 to 44 have already attempted one or another method of fertility control. The proportion of younger farm poor who have used or expect to use contraception clusters in the same range as all other groups of younger couples, farm and urban. Among the younger farm wives in all income levels, only 16 percentage points separate the subgroup with the lowest proportion using or expecting to use contraception (84 percent) from the highest (100 percent), while among older farm wives, the range is 28 percentage points. (A comparable narrowing of the range is evident between younger and older city couples.)

Within this general trend toward convergence, only the data on use of the pill reveal significantly lower proportions for the farm poor: Less than half as many younger poor farm couples have ever used the pill as younger poor city couples and as younger farm couples in higher income categories. Since the pill is a method which requires a physician's prescription and has proven very acceptable to both rural and urban poor where it has been made available to them in organized programs, the urban-rural and poor-nonpoor differences must reflect in large measure the considerably less access the rural poor have to continuing medical care. This is reinforced by another finding of the study that at least four out of five couples, in all classifications, knew about the pill in 1965.[4]

These results, it should be noted, are reported for farm wives, not for those living in rural areas. Since rural nonfarm couples are usually regarded as being even quicker than farm couples to adopt new ideas and practices, these findings must, if anything,

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[4] These national findings are replicated by unpublished results of a statewide study by the North Carolina Fund, made available through the courtesy of the Fund's Research Department. None of the rural poor respondents said they didn't know about the pills. 84 percent knew about them but had not used them, 10 percent had used them in the past, and 6 percent were using them in 1965. Only 5 percent had never heard of the IUD, but only another 5 percent had ever had one inserted.

TABLE 2.—*Preferred family size, percentage ever using or expecting to use contraception, and use of pill, by farm residence, color, income, and age of wife, 1965*

Residence and color	Income and age							
	Under $4,000		$4,000–$5,999		$6,000–$7,999 ($6,000 or more for nonwhites) [1]		$8,000 or more	
	Under 30	30–44	Under 30	30–44	Under 30	30–44	Under 30	30–44
	NUMBER OF CHILDREN PREFERRED							
Now living on farm:								
Total sample	3.2	4.3	3.2	4.0	3.1	3.4	4.0	3.3
White	3.0	4.1	3.3	4.0	3.1	3.4	4.0	3.3
Nonwhite	3.7	4.7	([2])	4.4	([2])	([2])	......	
Never lived on farm:								
Total sample	3.1	3.5	3.1	3.3	3.2	3.2	3.1	3.3
White	2.9	3.7	3.2	3.3	3.2	3.2	3.1	3.3
Nonwhite	3.4	3.2	2.8	2.9	2.9	2.9	......	......
	PERCENT EVER USING CONTRACEPTION							
Now living on farm:								
Total sample	70	62	82	70	100	86	74	88
White	78	72	80	70	100	90	74	88
Nonwhite	56	43	([2])	71	([2])	([2])	......	......
Never lived on farm:								
Total sample	77	60	85	73	92	83	88	87
White	77	53	82	73	92	83	88	87
Nonwhite	78	72	95	72	90	82	......	......
	PERCENT EVER USING OR EXPECTING TO USE CONTRACEPTION							
Now living on farm:								
Total sample	89	68	85	77	100	86	84	90
White	91	72	84	77	100	90	84	90
Nonwhite	84	62	([2])	75	([2])	([2])	......	......
Never lived on farm:								
Total sample	92	64	93	77	96	85	95	90
White	91	53	93	77	96	85	95	90
Nonwhite	92	83	95	74	98	85	......	
	PERCENT EVER USING PILL FOR CONTRACEPTION ONLY							
Now living on farm:								
Total sample	10	5	39	3	35	13	21	5
White	8	4	36	2	35	13	21	5
Nonwhite	12	6	([2])	8	([2])	([2])	......	
Never lived on farm:								
Total sample	24	8	30	7	33	11	31	10
White	26	6	29	7	34	10	31	10
Nonwhite	19	11	33	10	29	19	......	

Source: Preliminary data from 1965 National Fertility Study, made available through the courtesy of Professors Charles Westoff of Princeton and Norman Ryder of Wisconsin.

[1] For nonwhites, couples in the categories $6,000–$7,999 and $8,000 or more are combined and placed in the $6,000–$7,999 column.

[2] Too few cases.

understate the readiness of the rural poor, as a whole, for modern family planning services.

The difference of attitudes and practices among the younger farm poor, as compared to the older group, is of great significance for the planning of rural poverty programs. It seems evident that family planning programs in rural areas should give greater priority to reaching more of the younger women to assist them to realize their desires for smaller families, than to older women who already have more than four children. If this can be accomplished, the importance of family planning as a means of helping couples to escape from poverty would be vastly increased.

Rural Response to Organized Family Planning Services

National and local fertility studies thus reveal the context in which rural family planning programs must be conceptualized. From these findings, one would expect a considerable response by the rural poor to whatever organized family planning programs have attempted to make available in modern medical contraceptive services. The reports on ongoing programs submitted to the National Advisory Commission on Rural Poverty (*14*) confirm this expectation and highlight particularly the importance of oral contraceptives and intrauterine devices in programs for the rural poor (as in those for the urban poor). These pioneering rural programs have initiated services in diverse regions, among poor whites, Negroes, Mexicans, Indians, and migrant workers. They have been financed by public and private resources which have, for the most part, been so inadequate as to preclude serious efforts to expand the services to meet total needs in the areas served. For the most part, too, the provision of family planning has been attempted by already overburdened personnel; few of these programs have had staff assigned especially for this service. Despite these important limitations, significant achievements have already been recorded.

Essentially the same results have emerged in rural programs which have been studied and evaluated more formally. Bogue reported that adding oral contraceptives to the methods offered, coupled with an intensive educational program employing nonprofessional aids, quadrupled the rate of new patient intake in 18 months in health department clinics in 13 very rural and very poor counties in Alabama; at the same time, new patients increased by approximately the same rate in the remaining Alabama counties which were not in the study and did not mount educational programs, but which began, in 1964, to distribute pills *free* to medically indigent patients (*3*). (In the Bogue study, patients were charged 50 cents monthly for pills.)

In rural Lincoln Parish, Beasley and his coworkers found that less than 50 percent of lower socioeconomic group respondents were using an effective family planning method while 87 percent desired more information (*2*). A clinic was established in the local health department. In the first 8 months of operation in 1966, four out of five postpartum patients referred for family planning by the hospital at which they delivered attended the clinic and chose primarily IUD's and pills; of other women contacted by the program's outreach workers, a sufficient number came for the service during this 8-month period to lead to the preliminary validation of the hypothesis that "the provision of adequate family planning information and service would result in a high level of utilization of the services by the medically indigent population."

Considerations in Program Planning

The Need for Family Planning in Rural Areas

In 1964, the Planned Parenthood-World Population (PPWP) Research Department developed a formula (known as the Dryfoos-Polgar formula) for estimating minimum need for subsidized family planning services, which combines census data with a standard of medical indigency and biological and social research findings on fertility (*13*). The formula explicitly assumes that poor parents will want and have the average of three children that all Americans say they prefer and thus will be potential contraceptive patients only when they are not having desired pregnancies. It was proposed as a conservative and approximate measure of the need for services.

Based on the 1960 census, the formula showed that approximately 5 million (5.2 million in 1965) fertile, medically dependent women were not pregnant or seeking a desired pregnancy at any given time and thus could be regarded as the minimum potential patient load for subsidized contraceptive services. This finding has now been confirmed by a special Census Bureau tabulation for PPWP of the characteristics of women aged 18 to 44 living in poverty or near poverty in 1965. The breakdown by region, rurality, and metropolitan area from this tabulation is shown in table 3.

Thus almost 2 million rural poor couples account for 37 percent of the total need for family planning services in the United States. In the 110 largest metropolitan areas, 2.7 million couples account for an additional 50 percent of the need.

Family planning services for medically indigent patients are currently provided by planned parenthood centers, some voluntary and public hospitals, some local health departments, and some private physicians. Based on all available service statistics, it is estimated that no more than 700,000 women were enrolled in these diverse programs in 1966, leaving approximately 4.6 million without effective access to modern family planning services.

The reports available do not permit definitive analysis of the extent of current services in rural areas and estimates can be made only by extrapolation from known facts. For example, planned parenthood centers are located primarily in metropolitan areas, as are the most active services in hospitals. Insofar as rural areas have had any family planning services, they have been provided primarily by local health departments and by private physicians. Since only 897 local health departments—less than one-third of the 2,780 reporting—provided any family planning services at all in 1966 and since they served, in aggregate, approximately 175,000 patients,[5] it seems reasonable to infer that these are the outer limits of currently available services in rural areas. Allowing both for health department services located in urban areas and for rural residents served by private physicians who are reimbursed by welfare agencies, a reasonable estimate would be that a maximum of 125,000 rural women received tax-supported medical family planning services in 1966. Thus perhaps 6 percent of rural women in need are currently receiving subsidized services, compared to 13 percent for the nation as a whole and 17 percent for urban women. Based on the findings of the 1965 National Fertility Study, it would appear that perhaps another 10 to 15 percent of rural poor women currently receive services from private physicians, sometimes on a

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[5] 1966 American Public Health Association survey of State and local health department family planning activities.

TABLE 3.—*Minimum need for subsidized family planning services, by Census Bureau region, rurality, and Standard Metropolitan Statistical Areas, 1965* [1]

[Numbers in thousands]

Region	Total need	Need in rural areas				Need in SMSA's		Need in 110 SMSA's of over 250,000 population		Need outside SMSA's	
		Number living in rural nonfarm areas [2]	Number living on farms	Total rural areas	Percent of total need	Number	Percent of total need	Number	Percent of total need	Number	Percent of total need
All regions	5,290	1,582	394	1,976	37.4	2,991	56.5	2,665	50.4	2,299	43.5
Northeast	1,038	232	23	255	24.6	...	...	...	...	...	...
North Central	1,151	292	123	415	36.1	...	...	...	...	...	...
South	2,363	900	227	1,127	47.7	...	...	...	...	...	...
West	728	158	21	179	24.6	...	...	...	...	...	...

[1] Numbers denote fertile, medically indigent women aged 18–44 who are not pregnant or seeking a desired pregnancy at any given time. Medical indigency is defined as encompassing both poverty and near-poverty standards developed by Social Security Administration; for a family of 4, this amounted to an income of less than $4,145 for nonfarm residents and less than $2,920 for farm residents in 1965. Calculated by George Varky of PPWP Research Department, from special tabulation by the Bureau of The Census of a sample survey of households conducted in March 1966. Derived from Varky, Jaffe, Polgar, and Lincoln (*32*).

[2] Estimated on the basis of proportion of rural nonfarm families reported in the 1960 census of total nonfarm families, adjusted for income by region, and applied to the total nonfarm families reported in the 1966 Census Bureau tabulation.

paying basis and sometimes on a reduced fee or nonpaying basis. This would still leave approximately 1.6 to 1.7 million rural poor couples—between 79 and 84 percent—not receiving medical family planning services from any source.

Rural Health Facilities

Family planning is a relatively simple medical service. Many of the necessary instructional, outreach, and administrative functions in a family planning program are typically performed by nurses, social workers, and subprofessional personnel. Nevertheless, some physician manpower is required for examinations, prescription of pills, insertion of IUD's, and continuing medical supervision. In programing for family planning, therefore, it is necessary first to assess the health facilities available to provide these services.

It is well established that rural residents have access to fewer health facilities than urban dwellers and that rural areas have fewer physicians and other health personnel per capita. This is reflected in lower rates of doctor visits and general health expenditures in farm areas. In terms of access to medical family planning services, it is significant that women in their prime childbearing years (aged 25 to 34) averaged 3.9 physician visits per year in farm areas outside SMSA's and 5.1 in nonfarm areas outside SMSA's, compared to 6.5 in SMSA's (*22*).

As would be expected, rural public health programs are poorly organized. The following description of the public health services in four counties of rural Missouri seems hardly atypical (*1*): "The four-county area is part of a 22-county health district served by one part-time doctor, a health administrator, and some public health nurses. Livingston, Linn, Caldwell, and Daviess (counties) share a part-time nurse. A health program for the 4-county area had to be built from scratch."

The Maternal and Child Health (MCH) program, initiated more than 30 years ago by the Social Security Act, has emphasized services in rural areas and has been the principal Federal program through which tax-supported health care has been made available to needy mothers and children; it has been through this program primarily that official health departments have recently begun to offer family planning, even though MCH programs typically allocate greater resources to child care than to maternal care. The Children's Bureau does not have available an inventory of the number, location, or staffing of services financed by this program which would permit an evaluation of the extent to which they meet needs in rural areas. Yet the overall data document clearly the program's inadequacies. In 1964, 287,000 mothers received any kind of medical services in MCH clinics, only 7 percent of those who need them, according to a recent Department of Health, Education, and Welfare analysis (*34*). The report concluded that "present programs fall short of providing adequate health care for those mothers and children who live in poverty . . .; the majority of low-income mothers fail to receive adequate maternity care; most children of low-income families go without adequate preventive or remedial health care (even after handicapping conditions have been identified in screening programs)."

Two features of the rural health picture are somewhat more promising in terms of potential development of family planning services. First, the shortage of physicians in rural and semirural areas is confined largely to specialists, while the number of general practitioners is actually somewhat higher per capita than in urban areas; second, as a result of the Hill-Burton program of the last two decades, rural and semirural areas now have proportionately more hospitals and a share of the nation's hospital beds almost equivalent to their proportion of the population (table 4).

Rural physicians and hospitals must, of course, cover a population that is spread over considerably larger geographical areas than in more densely populated cities, and the simple per capita proportions may therefore be somewhat misleading. Nevertheless, the growth of rural hospitals is undoubtedly

TABLE 4.—*Urban-rural distribution of physicians and hospitals, 1966*

Item	*URBAN*[1]		*RURAL AND SEMIRURAL*[2]	
	Number	Percent of total in U.S.	Number	Percent of total in U.S.
Physicians in—				
Private practice	137,156	76.3	42,485	23.7
General practice	41,262	63.5	23,695	36.5
Internal medicine	18,985	85.0	3,342	15.0
Obstetrics-gynecology	10,473	84.0	2,006	16.0
Hospitals	2,382	42.7	3,198	57.3
Hospital beds	490,983	68.7	223,809	31.3
Resident population	127,781,600	66.3	64,988,200	33.7

Source: *Distribution of Physicians, Hospitals and Hospital Beds in the U.S.* Dept. Survey Res., Management Services Div., Amer. Medic. Assoc., 1966. (Table D.)

[1] 410 greater metropolitan and lesser metropolitan counties.

[2] 1,782 isolated semirural and isolated rural counties, plus 889 counties adjacent to metropolitan areas.

reflected in the impressive gains made during the last two decades in proportion of rural babies being born in hospitals. In 1964, while 97.5 percent of all U.S. deliveries occurred in hospitals, the proportion in nonurban places was 96.1 percent, compared to 98.6 percent in urban places. Only nonwhites living in nonurban places had a significantly lower proportion—75.4 percent—and many of the out-of-hospital deliveries were concentrated in a few States such as Alabama, Georgia, Mississippi, and South Carolina (*23*).

Thus, while rural areas suffer from severe shortages of general health manpower and facilities, the available resources do include a somewhat larger share of the nation's hospitals and general practitioners, and the vast majority of rural babies are now born in hospitals. Many of the hospitals are doubtless quite small but in designing a program to extend family planning services in rural areas, these facts are of critical importance on four grounds: First, women are most interested in family planning after they have delivered a baby; second, hospital clinics are the most economical and efficient mechanism for rapid, large-scale delivery of family planning services (*25*); third, a family planning service can be organized in even the smallest of hospitals; and fourth, any balanced rural program must include major emphasis on utilizing the private physician, since many communities are located far from health departments or hospitals. In this context, the improvement in physician's attitudes toward family planning found in a recent Georgia study offers support for the feasibility of involving the private doctor: Not only did nearly two-thirds of the general practitioners responding regard contraception as a standard medical procedure to be offered routinely by the physician, but four out of five respondents appeared not to regard publicly financed services for the poor as competitive with private practice (*37*).

Patterns of Health Care for the Poor

Health services for most of the American poor treat primarily emergency and chronic conditions which make medical attention absolutely necessary, rather than provide diagnostic and preventive services. Given the significantly lower rates of physician visits in rural areas and the distances which make it difficult to get to physicians' offices and other facilities, it seems likely that this pattern is even more intensified for the rural than the urban poor. That this has more to do with the availability and accessibility of health facilities than with the desire for health care by the rural poor is suggested by studies of the response to services which are realistically accessible. [See, for example, Browning and Northcutt (*5*) and the interesting discussion of accessibility in Peters and Chase (*26*).]

In this context, family planning assumes considerable importance as a preventive health service which, because it is popular, may be instrumental in helping the poor to make the transition to more comprehensive continuing systems of care if such systems are developed. If current discussions looking toward more comprehensive health services for the poor are to be productive, not only will the medical care system need to be reorganized and rationalized to improve the availability of services and make more efficient use of scarce personnel. The poor will also need to gain experience in utilizing a different kind of health service than that to which they have been accustomed.[6] In this process family planning may prove to be a decisive bridge. An adequate family planning consultation requires at least a Pap smear and a pelvic and breast examination, and some programs use the opportunity of the patient's visit to take other diagnostic tests (urinalysis, blood, and venereal disease tests, etc.). Further, hospitals almost uniformly report a doubling of the rate of return for postpartum examinations following introduction of family planning services at the postpartum clinic, and in some programs, there is evidence of increased attendance at prenatal clinics as well.

In many communities, the family planning clinic is the one health service which regularly attracts a large number of women who are both poor *and* healthy. Since the objective of comprehensive health planning is to prevent illness through proper preventive medical care, the importance of the family planning clinic is apparent. The development of a family planning service need not wait on the establishment of a comprehensive medical care program since the introduction of family planning, by itself, is of considerable medical and social significance and renders the health care available to the poor *more* comprehensive. But in any genuine program to develop a larger system of care, family planning may well be the key point of entry for many poor families.

The Cost of Family Planning Services

Compared to other health services, family planning is relatively inexpensive both in dollar costs and in terms of the staff and facilities required. In planned parenthood centers, the cost of providing family planning services averages between $20 and $25 per year per patient (including the cost of instruction, medical examination, Pap smear, and continuing supplies). In contrast, DHEW recently estimated the cost of comprehensive maternity care at $560 per patient and of comprehensive care during an infant's first year at $250 (*34*).

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[6] For a perceptive discussion of these problems of transition, see Morris (*21*).

In addition to the medical and instructional services rendered in the clinic, the $20 to 25 figure covers the cost of some community educational efforts. In the last several years, however, many programs, particularly those funded by the Office of Economic Opportunity, have added intensive outreach activities, usually employing nonprofessionals recruited from among the poor to contact potential patients and inform them of the availability of the service. The need for this kind of effort is even greater in rural areas, particularly to assist patients with transportation to the clinic and to provide followup services. While the scope of these outreach programs varies, their cost ranges between $20 and $30 per patient enrolled in the clinic.

The significance of these figures is not simply to point up the relatively small financial requirements for a major family planning program. The dollar amounts only symbolize the cost of the doctors, nurses, supporting staff, facilities, and supplies needed. Because both the funds and the professional resources required are relatively small, the organization of family planning services in rural areas is much more easily managed than development of more complex health services. In properly organized programs, family planning is essentially a service which can be provided to relatively large numbers of patients by relatively small numbers of professional personnel, with adequate supporting staff, in what amounts to a few hours weekly; it does not require lengthy advanced professional training and it can be (and is being) delivered more or less adequately even in makeshift quarters with only minimal medical equipment. Moreover, the equipment needed can be (and is being) transported from one location to the next, a factor which makes programing feasible in remote areas.

These considerations argue for placing much greater emphasis and priority on the extension of family planning services *now* for cogent health and social reasons, rather than postponing the implementation of these services until the total health infrastructure is adequately developed in rural areas.

Models for Rural Services

An Adequate Service Network

Since utilization of family planning services by the poor depends so heavily on geographic and economic accessibility, the first requirement in program development is to establish a network, or "grid", of available services offering care free of charge or at nominal fees.[7] A mother has little free choice in family planning if she has no doctor willing or able to spend the time to discuss it with her—or if she must choose between spending her already inadequate income on food for her children or contraceptive supplies.

In rural areas, the network of family planning services should encompass hospital clinics, organized programs involving private physicians, and health department clinics, complemented where needed by extramural family planning services and mobile units under the auspices of official and voluntary agencies. While this kind of network clearly could not provide the same degree of geographic accessibility in rural areas as in urban, the problems of distance can be at least partially overcome if clinic services are augmented by organized informational and follow up programs, employing nonprofessional workers to provide transportation and continuing contact, and utilizing the mail or other available means for distribution of continuing supplies between required medical checkups. Ongoing rural programs employ variations of these basic patterns, with services presently offered through only one or at most two of the potential delivery agencies. For any serious effort to provide adequate coverage, it will be necessary to organize and coordinate services through all available health facilities and to provide clinics at times (such as evenings) which best fit the patients' convenience.

Hospital Services

In urban areas, hospital family planning services are typically offered at the postpartum or gynecology clinic (or in a separate family planning clinic associated with the postpartum clinic). Whether or not this pattern can be replicated in rural hospitals will depend on the size and number of deliveries of the hospital. But if an adequate family planning service can be organized in a church basement, it can certainly be developed in even the smallest of rural hospitals. And where organized postpartum clinics are not feasible, the delivery period still provides a point of contact—often the only one—between the mother and the health system at a time when she is most receptive to medical advice on family planning. While the mother is still in the hospital after delivery, she can certainly be given instruction in family planning techniques and, if her method of choice is the pill, she can be given the necessary supplies or prescriptions before she leaves the hospital. Some programs have also had moderate success with the insertion of IUD's in the puerperal mother a day or two after she delivers (*6, 9, 31*).

For many patients the hospital may be too far away to provide effective continuing medical supervision and followup care, although the continuing distribution of supplies could be handled through the mail. In a coordinated program, it might prove feasible for the hospital to provide the introductory service, with followup undertaken by the local health department, private physicians, or community action agency.

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[7] See Perkin (*24*).

It should be noted that some rural women deliver their babies in hospitals in nearby metropolitan areas, which would offer another route by which the rural patient could be introduced to family planning. Here too, followup would need to be coordinated with local resources.

The hospital also may be a source of part-time personnel for mobile clinics which serve remote communities. This pattern is already employed in some areas, such as the rural programs in Alabama and Colorado.[8]

For some rural hospitals which have not thus far been especially responsive to the needs of poor patients in general and of minority groups in particular, the kind of services described here may represent a radically new departure. Yet these hospitals are, in many areas, the only organized health facilities which are operational on more than a token basis. Despite their limitations, there seems no alternative to the stimulation of hospital services if family planning is rapidly to be made available to the rural poor. Public policy should seek to create incentives which can facilitate the elimination of restrictive policies and attitudes and which can build on the hospitals' self-interest (25) in establishing adequate family planning services for medically indigent patients.

The Private Physician

For systematic coverage in rural areas, much more extensive involvement of the private physician, and particularly the general practitioner, will be necessary. The key here may lie in a properly administered program to subsidize family planning services delivered to eligible patients by the doctor in his own office, rather than leaving the matter to chance or to the physician's charitable instincts. For rural women on welfare, this has already become possible in some States and growth is likely as more title XIX programs are initiated. In few communities, however, have the private doctors been related to an active organized effort which informs the patient of her right to secure family planning, instructs her where to go, and educates the physician in the delivery of these services to poor patients.

Preliminary results from Bogue's project in eastern Kentucky appear to demonstrate the feasibility of an active program to subsidize the private physician (*3*), as do some of the Office of Economic Opportunity (OEO) projects. The optimum arrangement would seem to be for an area-wide program to be administered by the local health department or community action agency which enlists a panel of participating physicians, establishes eligibility rules, handles reimbursements, employs outreach workers to contact eligible patients and assist them in getting to the doctor's office, and provides some of the nonmedical followup. To facilitate this kind of program, it may be useful to set up, with local hospitals and medical societies, brief refresher courses for physicians on current developments in contraceptive technology and the family planning field.

Health Department Clinics

Family planning services operated by health departments have traditionally been offered in maternal health clinics. There seems no good reason why they cannot also be incorporated in well-baby clinics, mental health centers, and other general health clinics, since they require little additional personnel or special equipment. These clinics can provide not only introductory services, but continuing care for patients served initially in hospital programs.

In some areas public health nurses carry out an effective educational program making the service known to potential patients, assisting them to attend the clinic, and providing followup supervision (*10*). In some of the OEO projects, many of these functions are being performed by trained nonprofessional workers with little previous formal education. Many official health agencies have thus far resisted the development of subprofessional classifications, but the shortage of trained nurses is becoming increasingly acute. It seems clear that educational and followup services in family planning could be expanded considerably by the development of new categories of "family planning aids" in official health agencies, which would also increase the employment and career opportunities for the poor.

The local health department can play a critical role in the identification of potential family planning patients, not only through its contact with the population in its other health services, but also through the screening of birth certificates. In Lincoln Parish, La., and Wolfe County, Ky., birth certificates have been used successfully to identify potential patients for contact by educational workers attached to the program. A variant of this is to send letters to parents of newborn infants, whose names are often published in the newspapers, informing them where they can go for family planning instruction; this is being done in Bogue's eastern Kentucky program and by many planned parenthood groups, including the Planned Parenthood League of Massachusetts.

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[8] See papers by O. Bolding and S. Tepper in Jaffe, F. S. (ed.) (*14*).

New Health Centers

Special attention should be paid to the incorporation of family planning services in the new comprehensive rural health centers which are being made possible through the Appalachian Regional Commission and the OEO's Neighborhood Health Center program. Responsibility for family planning medical and educational services should be specifically assigned, the staff should receive appropriate training in the family planning field, and care should be taken to insure that the budget is sufficient to cover the cost of continuing contraceptive supplies.

Some of these programs involve the establishment of a central health center complemented by outposts in satellite locations which provide health education, nursing service, and transportation to the main center. Since a family planning unit can be transported fairly easily and inexpensively, it may prove desirable to offer part-time family planning clinics in the outposts as well as at the main center. These Clinics would provide residents of remote areas with a tangible and desired medical service at their first point of contact with the larger system and accelerate their acceptance of the total program.

Voluntary Agencies and Mobile Units

In many areas, the services which can be anticipated through hospitals, private physicians, and health departments will need to be augmented by services organized by voluntary agencies, such as community action programs, church groups, and planned parenthood committees. Private agencies can frequently be more flexible and innovative in adapting programs to fit particular local needs. Private agency programs typically employ one or more local physicians to serve in the clinic several hours weekly, as well as supporting staff for administration, community education, and followup.

In urban areas, planned parenthood centers have pioneered the use of mobile units of two kinds: self-contained units which are large enough to encompass waiting and examining rooms, and smaller units which transport staff and equipment to part-time satellite clinics in churches, settlement houses, community centers, and other neighborhood locations. All of the necessary equipment can be conveniently stored in a compact delivery wagon and removed at the location for setting up the clinic. This approach to bringing the service to the patient may be particularly applicable in rural counties.[*]

Priorities in Rural Program Development

The Need for a Planned Program

Hospitals, private physicians, health departments, and voluntary organizations are the principal agencies for the delivery of modern family planning services. Any adequate program to make these services available to the rural poor will need first to determine which of these resources is located in the area to be served, and to choose which program emphases, among the varied possible alternatives, are likely to stimulate the most rapid involvement of the available resources in delivery of services to the largest group of potential patients. Low population density and shortage of health resources in rural areas necessitates an even greater degree of program planning and rationalization of resource use than in urban areas.

Because of both the more active interest of younger couples in effective fertility control and the evidence that too many children too early in the family life cycle hinder couples from moving up the economic ladder (*29*) an organized family planning program for the rural poor should emphasize those efforts which are likely to serve large numbers of young women as early in their family-building years as possible. Since women at this stage of life tend to be healthy, they are likely to have little contact with health resources until the premarital examination (where this is required). Ideally, instruction in family planning at this point would be preferred, since it would permit the couple to begin marriage with effective control over fertility; it is conceivable that such instruction is likely to occur more frequently as private physicians become increasingly involved in delivery of family planning to the poor. At present, however, it seems more likely that poor women begin to have continuing contact with health resources only with their first pregnancy and delivery. These considerations argue strongly for a strategy which places highest priority on development of family planning services in hospitals where 96 percent of babies in nonurban places are born. Such a strategy is also supported by the relatively greater availability of hospitals in rural areas, as compared to other direct medical care facilities.

At the same time, hospital family planning services have many limitations, particularly in their capability for providing continuing care. To augment hospital services, second priority should be given to development of programs which can provide informational outreach, casefinding, introductory services for nonhospital patients, and followup supervision. These essential auxiliary programs could be administered by community action agencies, health departments, or voluntary organizations; and they should draw on local private physicians as well as the personnel of official agencies. In many rural areas, a community action agency may be in a better position, because of the wider scope of its programs and greater flexibility of staffing, to act quickly to coordinate this kind of program than the local health department; this sort of determination, however, can only be made locally on the basis of an evaluation of the capabilities and interests of the respective agencies.

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[*] For additional guidelines on development of family planning services in varied settings, see two recent Planned Parenthood-World Population publications: *Family Planning Services in Public Health Programs* and *Family Planning Programs in the War Against Poverty.*

Long-term efforts to build up the rural health care structure are of obvious importance to the delivery of family planning services which should, ultimately, be an integral part of a combined preventive and curative rural health services system. It is evident, however, that such a system will be quite costly and will not emerge for some time. For both health and social reasons, it would be self-defeating to defer the extension of family planning until the total health care system is adequately developed. Relatively minor programs aimed at improving general rural health services, therefore, have only limited immediate significance for the extension of family planning, given the multitude of competing priorities.

The phasing-in of a rationalized rural family planning program will necessitate hard choices in allocating resources. Major emphasis on hospital programs is likely to favor relatively more populous rural areas, which would be desirable from the viewpoint of serving the largest possible number of people. But it would not meet the needs of areas which are more remote and may be among the poorest. Program guidelines should be applied in a manner flexible enough to respond to a concrete interest in developing family planning services expressed by local groups in as many rural areas as possible, regardless of size. Yet it seems inevitable that major initial attention would be centered in areas which have relatively greater health resources and populations in need of services. As the program gains momentum, it should be planned to fan out from these better equipped localities into more remote communities, using the initial program as a base and drawing on it for experienced and part-time personnel.

Illustration: Characteristics of Selected Adjacent Counties

To illustrate one approach to defining priorities for a planned program, the 880 counties classified by the U.S. Public Health Service as "adjacent" (because they are contiguous to metropolitan areas) were examined for various demographic and health characteristics.[10] Among these counties were a group of 144 counties in 28 States which had a rural population of more than 30 percent and 5-year birth rates from 1958 to 1962 of over 130 per 1,000 population. This rate is higher than the national average during this period and was chosen, not simply because of its intrinsic importance to program development in family planning, but also because a high birth rate usually signifies a larger-than-average population in the childbearing years.

These 144 high fertility, adjacent, more-or-less rural counties were subjected to closer analysis, and preliminary identification was attempted of the facilities available for family planning services. Selected characteristics for each county are detailed in table 5 in the appendix, while a summary for the group as a whole follows:

	Number
Total population, 1960	4,248,571
Total number of hospitals, 1966	198
Hospitals reporting provision of family planning services, 1966	1
Health departments reporting limited family planning services, 1966	51
Total number of general practitioners, 1966	1,499
Total number of obstetrician-gynecologists, 1966	140

	Number	*Percent* [1]
Counties more than 60 percent rural	88	62
Counties less than 19 percent nonwhite	81	56
Counties with median income below $4,000	70	49
Counties with 5-year (1958–62) birth rate above 140	83	58
Counties with infant mortality rate above 30.8	83	58

[1] Percentage of 144 counties.

The 144 counties include 4,250,000 persons. Three out of five counties have populations which are more than 60 percent rural and less than 19 percent nonwhite. Half have median incomes below $4,000. The highest 5-year birth rate among them is 197 (approximating the rate in the developing countries), and three out of five counties had 5-year rates above 140. Three out of five also ranked among the 30 percent of U.S. counties with the highest infant mortality rates,[11] registering rates of more than 30.8 infant deaths per 1,000 live births; the highest infant death rate recorded in these counties was 57.5. About 1,500 general practitioners practice in these counties, or 35 per 100,000 population, which is the average for the United States as a whole. The number of obstetrician-gynecologists is considerably smaller—140, or about 3.3 per 100,000 population, half the national average.

Nearly 200 hospitals are located in these counties—3.5 percent of all U.S. hospitals, serving counties which comprise 2.2 percent of the U.S. population. Among them, only one hospital reported providing family planning services in 1966. Health departments reported limited family planning programs in only 51 counties, most of which served less than 200 patients in 1966.

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[10] The writer is indebted to the Maternal and Infant Health Computer Project of George Washington University for their cooperation in making available for this analysis consolidated data on these counties, and to Dr. Johan Eliot of the University of Michigan for making available the detailed county reports from the 1966 American Public Health Association Survey of State and Local Health Department Family Planning Activities.

[11] For decile ranking of U.S. county infant mortality rates, see U.S. Children's Bureau (*33*).

Time did not permit calculation of the Dryfoos-Polgar formula for each of the 144 counties; analysis of the income and population distribution, however, suggests that between 175,000 and 225,000 fertile medically dependent women would comprise the minimum estimated need for subsidized family planning services in these counties. Based on the reported level of available services, it would appear doubtful if more than 10,000 of them are currently being served.

Even this preliminary, and necessarily sketchy, analysis thus provides considerable documentation of the need for a targeted family planning program in rural areas. These counties are relatively more populous and better supplied with health resources than more isolated rural counties. Yet they contain a significant number of poor couples in need of subsidized family planning services. In most there are no organized services under any auspices. Health department programs in some of these counties are very limited in scope, while services are virtually nonexistent in hospitals, the one community health resource with which the poor are likely to be in contact.

An energetic and adequately funded program in these counties, with the objective of achieving maximum coverage in the shortest period of time, would assign highest priority to stimulation of hospital family planning services. It would also seek to expand health department clinics and to establish additional services and satellite operations which enlist in the program private physicians and other local agencies.

Financing Family Planning Programs

A program to provide modern family planning services for 5.3 million medically indigent women throughout the country is estimated to cost a minimum of $100 million annually for medical services and supplies—less than 1 percent of the $10.2 billion currently being expended for health by governmental agencies (*11*). Rural areas, with approximately 2 million potential patients, would need a minimum of $40 million annually. Most State and local health agencies do not have funds of this magnitude available for new services. The California State Department of Health, for example, recently estimated that it needs $1.9 million for *immediate* expansion of family planning programs and will need between $7 and $8 million ultimately; the Florida Board of Health has plans for services which would cost approximately $4 million. It seems unarguable that States and counties with large concentrations of rural poverty and small tax bases are even less likely to be able to afford to finance these services.

The new medical assistance program under title XIX of the Social Security Act is frequently cited as a potential financing mechanism for family planning services. Apart from the fact that Medicaid has only been adopted in 32 States and that these are largely among the more prosperous States, the programs thus far have been limited for the most part to public assistance recipients. Of the 5.3 million medically indigent women in need of family planning services in both rural and urban areas, less than 15 percent are recipients of public assistance (*32*). Thus title XIX is likely to have only very limited impact for some time to come.

Any realistic effort to extend family planning to the poor, therefore, will depend on Federal policies and programs which provide considerably larger allocations for these services. To be effective, a Federal program also needs top-level administrative leadership and must be flexible enough to fund services through a variety of delivery agencies.

In the last year, the mechanism for financing family planning services preferred by the Department of Health, Education, and Welfare has been the new "partnership for health" program (Public Law 89-749) which makes block grants available to State health departments to be used at their discretion for various health services. While this program may prove useful in the long run in building up the general health care structure, its value as a means of expanding family planning services is highly dubious for two principal reasons: The new funds authorized thus far for this program have been minimal and must be shared with other new health areas. And even if additional funds ultimately become available, the "partnership for health" program is likely to have only minor influence on hospital services—the principal agency for large-scale delivery of family planning—because many State health departments are only tangentially related to local hospital operations. State and local health departments can be an important component of a total program in this field, but rapid expansion of family planning services cannot be achieved through predominant reliance on them.

During the last 2 years, many local agencies have found the nascent family planning program of DHEW and OEO frustrating, particularly because Federal funds for these services have been minimal and have been available only at the expense of other health and antipoverty programs. In testimony this year before the House Appropriations Committee, Lesser correctly summed up the current situation in regard to family planning when he stated that "the fact of the matter is there are so many requests for these funds there is not enough money in OEO or HEW to respond to all of them (*20*).

The experience to date thus supports the belief that only earmarked funds will give the family planning field sufficient priority to compete successfully, at Federal, State, and local levels, with other long-established fields of health care. A recent assessment of Federal programs in family planning, which characterized the DHEW effort thus far as "leaderless and leisurely," revealed that DHEW officials now concede the evidence to support the comprehensive funding approach is "scanty"(*19*).

Several proposals introduced in the 90th Congress would provide earmarked funds, for a limited number of years, to initiate family planning programs which would subsequently be incorporated in the general health services system. One measure (by Senator Tydings) would authorize Federal expenditures, beginning at $20 million and increasing to $75 million in 5 years, through either the Children's Bureau or the Public Health Service, or both, at the discretion of DHEW. Another (by Representative Scheuer) would allocate similar amounts to OEO. A combination of the two approaches would seem to be the most desirable course at this stage, since none of the Federal agencies alone relate directly to the variety of local resources which need to become involved in family planning programs. This may be of even greater significance in rural than in urban areas since the community action agency in many rural communities may be the local group least tradition-bound, and resourceful and responsive enough to seek to start a family planning program.

At this writing (June 1967) it appears likely that Congress will adopt two measures which will constitute a significant beginning of a serious national effort in family planning. The 1967 poverty bill, as passed by the Senate and reported by the House Education and Labor Committee, would make family planning a "national emphasis" program, along with Head Start, Legal Services, and three other programs. The 1967 Social Security bill, as adopted by the House and currently before the Senate Finance Committee, authorizes additional funds for the Children's Bureau which are clearly intended to be used for family planning services. Both of these moves should help to give higher priority to family planning, although the amount of additional funds which will actually become available is still in doubt in view of pressing budget constraints.

An overall Federal program such as is envisioned in the Tydings and Scheuer measures would make available sufficient funds for adequate family planning services for all of the poor. Their adoption would obviate the need for special enabling legislation for rural areas. If rural health services become the subject of new legislative proposals, however, special attention should be given within such proposals to—and special funds should be provided for—the development of rural family planning services. Significant progress in family planning has come most rapidly in the last several years in those programs which have assigned this field high priority and specific staff. Given the receptivity of the potential patients which has been documented in this report, there seems little reason to doubt that this will also prove to be true in rural areas.

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Appendix

TABLE 5.—*Selected characteristics of 144 high fertility counties adjacent to metropolitan areas*

State and county	1960 population [1]	Rural residence [1]	Non-white [1]	1959 median income [1]	5-year birth rate per 1,000 population 1958–62 [1]	Infant death rate per 1,000 births 1958–62 [1]	General practitioners [2]	Obstetrician-gynecologists [2]	General hospitals [3]	Hospitals reporting family planning services [3]	Health department reporting limited family planning services [4]
	Number	*Percent*	*Percent*	*Dollars*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	
ALABAMA:											
Autauga	18,739	64.7	42.2	3,170	135	36.2	4	0	1	0	yes
Bullock	13,462	72.5	71.9	1,557	140	54.6	4	0	1	0	yes
Clarke	25,738	68.4	49.5	2,766	139	37.9	7	0	3	0	yes
Escambia	33,511	49.3	34.2	3,398	140	36.0	17	0	2	0	yes
Greene	13,600	79.5	81.3	1,404	139	43.3	4	0	1	0	yes
Hale	19,537	84.2	70.7	1,703	142	46.9	5	0	1	0	yes
Lowndes	15,417	100.0	80.7	1,387	151	40.8	2	0	0	0	yes
Monroe	22,372	83.8	50.7	2,481	135	35.8	6	0	1	0	yes
Washington	15,372	100.0	34.5	2,907	131	36.7	3	0	1	0	yes
ARIZONA:											
Cochise	55,039	54.7	3.6	5,107	138	31.8	22	1	5	0	no
Pinal	62,673	56.0	15.4	4,412	157	39.5	24	1	5	0	no
Santa Cruz	10,808	32.6	1.3	4,620	165	25.1	6	0	1	0	no
Yuma	46,235	42.1	8.3	5,360	144	37.3	19	3	1	0	no
ARKANSAS:											
Mississippi	70,174	61.5	29.7	2,725	145	41.1	23	1	3	0	yes
Poinsett	30,834	74.9	10.5	2,591	134	29.5	9	0	0	0	no
CALIFORNIA:											
Imperial	72,105	36.5	7.9	5,507	139	34.2	20	4	4	0	yes
Kings	49,954	58.3	6.5	4,957	141	31.2	29	0	5	0	yes
Merced	90,446	63.9	7.5	4,806	146	23.7	33	3	5	0	yes
Ventura	199,138	38.1	3.3	6,466	132	23.8	113	17	6	0	yes
Yuba	33,859	39.4	5.4	5,031	143	25.8	10	3	2	0	yes
COLORADO:											
Morgan	21,192	48.1	0.3	4,794	131	28.3	13	0	2	0	N.R.
Otero	24,128	46.3	1.2	4,678	134	34.3	14	0	2	0	N.R.
DELAWARE:											
Kent	65,651	80.6	15.2	4,939	156	26.3	12	3	1	0	no
FLORIDA:											
Baker	7,363	63.7	21.7	3,227	136	31.7	3	0	1	0	yes
Brevard	111,435	45.9	11.2	6,123	148	26.3	49	14	4	0	yes
Clay	19,535	64.9	13.8	4,202	130	30.1	6	0	1	0	yes
Nassau	17,189	57.7	25.1	4,465	132	33.9	7	0	1	0	yes
Okaloosa	61,175	50.8	6.9	4,901	165	26.2	12	2	2	0	yes

GEORGIA:										
Bryan	6,226	100.0	36.9	2,810	155	38.1	1	0	0	0	yes
Burke	20,596	74.0	66.4	1,855	141	44.5	4	0	1	0	yes
Calhoun	7,341	100.0	65.1	1,913	146	36.1	3	0	0	0	yes
Columbia	13,423	100.0	35.7	3,736	145	36.3	3	0	0	0	yes
Crawford	5,816	100.0	57.8	2,355	133	29.7	0	0	0	0	yes
Henry	17,619	100.0	42.6	3,897	135	38.4	3	0	0	0	yes
Lee	6,204	100.0	62.7	2,434	139	34.5	0	0	0	0	yes
McDuffie	12,627	64.2	42.4	2,973	136	38.4	6	0	1	0	yes
Macon	13,170	71.6	63.0	2,338	132	45.1	5	0	1	0	yes
Marion	5,477	100.0	60.1	2,081	130	33.6	2	0	0	0	yes
Mitchell	19,652	52.4	51.0	2,706	148	41.6	7	0	1	0	yes
Peach	13,846	40.0	58.7	3,651	138	48.5	8	0	1	0	yes
Pulaski	8,204	51.6	43.4	3,215	132	49.6	5	0	1	0	yes
Rockdale	10,572	72.7	27.3	4,061	130	39.2	2	0	0	0	yes
Terrell	12,742	60.3	64.4	2,057	145	57.5	5	0	1	0	yes
Twiggs	7,935	100.0	60.1	2,880	137	35.7	2	0	0	0	yes
Worth	16,682	78.4	48.2	1,991	140	41.7	6	0	1	0	yes
IDAHO:											
Elmore	16,719	64.2	3.0	4,769	197	22.4	4	0	1	0	no
INDIANA:											
Bartholomew	48,198	56.7	0.7	5,865	139	24.3	21	2	1	0	no
Dubois	27,463	60.4	2.1	4,715	141	20.3	15	1	2	0	no
Scott	14,643	47.8	.....	4,288	143	18.5	5	0	1	0	no
IOWA:											
Jackson	20,754	71.5	.....	4,585	131	21.1	12	0	2	0	no
Johnson	53,663	37.7	1.0	5,309	144	19.7	19	1	2	0	no
KENTUCKY:											
Bullitt	15,726	100.0	1.5	4,640	131	32.4	5	0	0	0	no
Daviess	70,588	39.8	4.4	4,786	131	26.4	20	5	2	0	yes
Martin	10,201	100.0	.....	2,071	135	49.1	1	0	0	0	yes
Woodford	11,913	65.9	13.2	4,509	130	29.6	8	0	1	0	no
LOUISIANA (Parishes):											
Acadia	49,931	44.2	19.7	3,128	143	30.6	18	3	2	0	no
Ascension	27,927	66.6	31.9	3,877	149	32.6	6	0	1	0	no
Beauregard	19,191	62.5	22.4	3,148	138	25.2	5	0	2	0	no
Iberia	51,657	33.0	28.7	4,329	164	33.7	26	3	2	0	no
Iberville	29,939	74.3	49.0	3,125	149	31.5	13	0	1	0	no
Jefferson Davis	29,825	37.1	21.2	3,795	141	30.7	15	0	2	0	no
Lafourche	55,381	58.5	12.2	4,330	158	25.4	19	5	2	0	no
Livingston	26,974	77.8	15.0	2,825	134	31.4	5	0	1	0	no
Morehouse	33,709	54.9	46.9	3,248	140	35.3	17	0	1	0	no
Plaquemines	22,545	65.5	28.8	5,127	152	27.4	7	0	1	0	no
Richland	23,824	72.4	44.4	2,286	151	38.8	9	1	2	0	no
St. Charles	21,219	77.9	27.1	5,289	167	28.9	8	0	1	0	no
St. Landry	81,493	64.7	43.0	2,480	149	39.1	27	5	3	0	no
St. Martin	29,063	66.4	37.2	2,518	149	43.6	7	0	2	0	no
Tangipahoa	59,434	64.3	33.9	2,917	144	35.2	19	3	4	0	no
Vermilion	38,855	59.6	12.9	3,354	134	25.0	16	3	3	0	no
Washington	44,015	44.2	33.9	3,924	131	32.1	14	2	3	0	no
West Baton Rouge	14,796	60.8	49.3	4,037	156	35.8	3	0	0	0	no

References at end of table.

TABLE 5.—*Selected characteristics of 144 high fertility counties adjacent to metropolitan areas*—Continued

State and county	1960 population [1]	Rural residence [1]	Nonwhite [1]	1959 median income [1]	5-year birth rate per 1,000 population 1958–62 [1]	Infant death rate per 1,000 births 1958–62 [1]	General practitioners [2]	Obstetrician-gynecologists [2]	General hospitals [3]	Hospitals reporting family planning services [3]	Health department reporting limited family planning services [4]
	Number	*Percent*	*Percent*	*Dollars*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	
MARYLAND:											
Calvert	15,826	100.0	42.2	4,566	144	29.6	6	0	1	0	yes
Charles	32,572	100.0	33.5	5,351	157	40.3	10	0	1	0	yes
Harford	76,722	70.7	10.0	5,863	139	24.9	24	5	1	0	yes
MICHIGAN:											
Midland	51,450	46.0	0.2	6,627	143	16.6	12	6	1	0	no
MINNESOTA:											
Carver	21,358	88.3	0.1	4,990	131	21.7	14	0	2	0	no
Lake	13,702	38.6	0.3	5,584	158	16.1	6	0	1	0	no
Scott	21,909	68.9	0.1	5,244	153	24.0	9	0	1	0	no
Wilkin	10,650	59.3	0.5	4,185	131	24.2	3	0	1	0	no
MISSISSIPPI:											
De Soto	23,891	100.0	61.3	2,093	152	41.8	6	0	0	0	N.R.
George	11,098	100.0	11.6	3,401	145	29.6	7	0	1	0	N.R.
Jackson	55,522	38.7	19.6	5,120	150	28.1	20	2	1	0	N.R.
Madison	32,904	70.5	71.8	1,862	154	43.7	10	0	1	0	N.R.
Marshall	24,503	77.1	70.4	1,784	155	36.9	7	0	1	0	N.R.
Scott	21,187	81.5	38.4	2,352	131	51.9	9	0	1	0	N.R.
Warren	42,206	31.0	46.8	3,547	133	43.1	10	4	4	0	N.R.
Yazoo	31,653	64.5	59.4	2,102	144	48.2	8	0	2	0	N.R.
MONTANA:											
Big Horn	10,007	72.1	34.2	4,375	160	39.1	3	0	1	0	no
Meagher	2,616	100.0	0.4	4,949	131	23.2	1	0	0	0	no
Treasure	1,345	100.0	0.1	4,538	132	33.7	0	0	0	0	no
NEBRASKA:											
Thurston	7,237	100.0	22.8	3,570	140	29.4	3	0	1	0	no
NEW MEXICO:											
Dona Ana	59,948	43.7	2.8	4,968	165	24.8	12	4	1	0	no
Otero	36,976	32.6	7.4	6,154	161	29.7	7	2	1	0	no
Sandoval	14,201	81.9	42.0	2,409	156	40.1	0	0	0	0	no
Valencia	39,085	54.0	13.4	5,615	160	37.7	7	0	1	0	no
NEW YORK:											
Lewis	23,249	84.4	0.1	4,760	132	22.1	10	0	1	0	no
OHIO:											
Holmes	21,591	85.6	.....	4,218	135	20.5	9	0	1	0	no
Putnam	28,331	88.5	.....	4,797	152	20.3	11	0	0	0	no
SOUTH CAROLINA:											
Clarendon	29,490	86.7	68.3	1,945	134	40.3	4	0	1	0	yes

Fairfield	20,713	83.2	59.5	2,730	132	31.0	5	0	1	0	yes
Georgetown	34,798	56.3	52.1	3,160	135	35.9	12	1	1	0	no
Orangeburg	68,559	79.8	60.1	2,603	130	40.9	21	3	1	0	yes
Sumter	74,941	59.8	46.8	3,267	164	28.3	15	4	1	0	yes
Williamsburg	40,932	90.5	66.5	1,631	130	45.8	14	0	1	0	yes
TENNESSEE:											
Fayette	24,577	100.0	68.9	1,363	142	49.2	7	0	0	0	yes
Rutherford	52,368	56.8	13.7	3,857	143	26.4	11	5	1	0	yes
Tipton	28,564	81.5	39.2	2,610	138	42.2	7	0	1	0	yes
TEXAS:											
Bell	94,097	34.2	12.1	3,981	157	28.2	26	4	6	1	no
Castro	8,923	67.1	4.2	4,270	145	51.6	8	0	1	0	no
Crosby	10,347	100.0	8.5	3,701	153	41.5	2	0	1	0	no
Deaf Smith	13,187	42.0	2.0	4,499	167	51.0	6	0	1	0	no
Dimmit	10,095	43.5	0.5	2,480	144	47.8	3	0	1	0	no
Duval	13,398	51.7	0.1	2,878	140	27.0	4	0	0	0	no
Floyd	12,369	69.5	7.2	4,307	146	40.9	5	0	2	0	no
Hale	36,798	49.1	5.5	4,650	149	39.6	16	4	4	0	no
Hartley	2,171	69.3	0.1	6,691	144	9.5	0	0	0	0	no
Hockley	22,340	54.6	5.7	4,738	143	44.0	8	0	2	0	no
Hudspeth	3,343	100.0	0.4	4,636	150	31.7	0	0	0	0	no
Lamb	21,896	67.0	7.7	4,156	140	41.9	9	0	3	0	no
La Salle	5,972	33.7	0.1	2,296	135	53.0	2	0	0	0	no
Lynn	10,914	72.4	6.1	4,043	153	48.4	2	0	0	0	no
Martin	5,068	100.0	4.2	5,651	131	40.4	0	0	0	0	no
Oldham	1,928	100.0	0.2	4,806	131	23.6	1	0	0	0	no
San Patricio	45,021	39.7	1.9	3,803	152	36.8	17	0	2	0	no
Swisher	10,607	58.4	4.1	4,770	139	35.1	4	0	1	0	no
Terry	16,286	36.8	3.7	4,867	158	48.7	9	0	1	0	no
Upton	6,239	45.9	4.4	5,595	133	24.0	1	0	2	0	no
Willacy	20,084	53.3	0.5	2,902	170	42.4	8	0	1	0	no
Zapata	4,393	100.0	0.4	1,766	132	36.0	2	0	0	0	no
UTAH:											
Box Elder	25,061	53.2	4.0	6,139	160	17.6	13	0	2	0	no
Cache	35,788	40.6	0.4	5,054	156	14.8	14	3	1	0	no
Morgan	2,837	100.0	0.2	5,563	137	20.5	2	0	0	0	no
Summit	5,673	100.0	0.3	4,947	132	22.6	3	0	0	0	no
Tooele	17,868	48.9	3.8	5,679	143	27.2	6	0	1	0	no
Wasatch	5,308	44.7	0.1	4,935	140	22.7	2	0	1	0	no
VIRGINIA:											
Charles City	5,492	100.0	83.3	3,359	164	30.9	1	0	0	0	no
Prince William	50,164	76.4	8.2	5,468	165	27.9	17	1	1	0	yes
WISCONSIN:											
Calumet	22,268	79.8	0.2	5,525	136	20.7	9	0	1	0	no
Grant	44,419	70.1	0.1	4,294	134	20.9	24	0	5	0	no
Outagamie	101,794	32.7	1.0	6,042	152	20.9	37	6	3	0	no
St. Croix	29,164	71.7	0.1	5,071	136	23.1	13	0	4	0	no
Washington	46,119	66.2	0.1	6,209	136	24.2	23	0	1	0	no
Totals	4,248,571	.....	.....	.....	.....	.....	1,499	140	198	1	51

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[1] Consolidated data on 880 adjacent counties, made available through the courtesy of the Maternal and Infant Health Computer Project of George Washington University.

[2] American Medical Association, *Distribution of Physicians, Hospitals and Hospital Beds in the U.S., by Census Region, State, County and Metropolitan Area*, 1966.

[3] *Journal of the American Hospital Association*, Guide Issue, August 1, 1966

[4] 1966 American Public Health Association Survey of State and Local Health Department Family Planning Activities, made available through the courtesy of Dr. Johan Eliot of the University of Michigan.

N.R. = Not reported.

ACKNOWLEDGMENTS

Many persons made valuable suggestions which contributed much to the preparation of this report. The author is particularly indebted to his colleague, Dr. Steven Polgar, formerly PPWP Director of Research and currently Associate Director of the Carolina Population Center, University of North Carolina, for numerous ideas and criticisms of the manuscript. Useful comments were also made by other PPWP staff members, principally Dr. Charles Dean, Mrs. Joy Dryfoos and Mrs. Jeannie Rosoff, and by Dr. Gordon Perkin of the Ford Foundation. Relevant material was provided by Dr. Robert Levine, Dr. John Frankel and Miss Wendy Goepel of the Office of Economic Opportunity, and Dr. Arthur Lesser and Dr. W. T. Tompkins of the Children's Bureau. The author also acknowledges with gratitude the cooperation of several research centers in making available unpublished findings of current investigations: Dr. Charles Westoff of Princeton and Dr. Norman Ryder of Wisconsin, for data from the 1965 National Fertility Study; Dr. Joseph Beasley and Dr. Carl Harter of Tulane, for data from the Lincoln Parish Study; Dr. Johan Eliot of Michigan, for material from the 1966 American Public Health Association Survey of State and Local Health Department Family Planning Activities; the Research Department of The North Carolina Fund, for data from the Survey of Low-Income Families in North Carolina; and the Maternal and Infant Health Computer Project of George Washington University for consolidated data on adjacent counties.

Chapter 22

Acceptance of a Family Planning Program by the Rural Poor: Summary of an Experiment in Alabama

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Introduction

The heavy burden which bearing large families places upon the nation's poor, and the retardative effect it has upon all programs for improving the condition of the poor, is well known and well documented. It is also well known that high fertility is one of the characteristics of the poor who live in rural areas. Much less studied is the problem of actually trying to help the rural poor by providing family planning services. Some believe that the city places such a severe economic cost upon childbearing that even the poorest "get the message" and welcome an opportunity to curtail fertility, but that in rural areas these costs are much less severe and a program of fertility planning would not meet with much acceptance. Others believe that the rural poor have "a high fertility culture" or "big family attitudes" and could not be motivated without a rather thorough modernization of their outlook. Still others believe that the rural poor are too apathetic, too irresponsible, too unconcerned about the long-run consequences of their daily acts to be able to make a successful sustained effort to avoid pregnancy.

All of these outlooks tend to draw one common conclusion: it is not worth the time, personnel, and money it would take to attempt to bring family planning to the poverty-stricken rural areas; it is believed that such services would not be appreciated, would not be used, and if used would lead only to half-hearted, clumsy, and sporadic efforts that would have no impact upon family size.

This paper is a report of research conducted to test this set of ideas. Probably there is no single set of inferences more crucial today than the judgment of the potential for rapid fertility control in rural areas where the level of education is extremely low and incomes are in the poverty range. Three-fourths of the world's poverty-stricken peoples fall in this category, and three-fourths of the world's high-birth rate populations have this combination of traits. Clearly, it is dangerous to arrive at the conclusions summarized above by deduction; there should be actual experiments. Efforts to bring family planning to the rural poor should be abandoned only after a variety of sincere efforts have failed.

One of the surprising aspects of recent family planning research has been the comparative absence of experimental efforts to work in highly rural areas. Most family planning activity in the United States has been concentrated in the large metropolitan centers. Almost all of the leading fertility studies have dealt with urban populations.[1] As a result, the attitudes, knowledge, and use of contraception by rural peoples is little known. Such practical experience as has accumulated concerning the acceptance of family planning by the rural poor is widely dispersed in small towns throughout the country and is knowledge in the heads of persons who do not dominate the large national family planning organizations. Only seldom do these persons get an opportunity to report, and even then the significance of their statements is underappreciated. Not a little of this is due to the fact that they are unable to provide research documentation for their opinions and experience.

The Community and Family Study Center at the University of Chicago has had a sustained interest in scientific research on the fertility behavior of the rural poor of the world. It was convinced as early as 1961 that a strategic error was being made by neglecting rural populations in the burgeoning movement to research and experiment with family planning around the world. It has sponsored or cosponsored studies of rural populations in Pakistan and Latin America, and in the rural South of the United States. The most comprehensive and oldest of these experiments is the Alabama Clinic-Plus-Education family planning program that has been conducted in the Black Belt of the old plantation zone of Alabama in collaboration with two organizations: Bureau of Maternal and Child Health, Alabama Department of Health, Dr. Harold Klingler, director; and Planned Parenthood League of Alabama, Mrs. Berney Rogers, executive director. This program began in September 1963 and is still continuing as of November 1967. It is therefore one of the oldest and most sustained experiments to study rural fertility in the United States. Because it deals with a population of extreme poverty, the findings are thought to have relevance not only for other rural populations in the United States, but in the developing nations as well.

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[1] The famous study by Whelpton and Kiser (*5*) was based on data collected in Indianapolis. Another famous series of studies, known as the Princeton Studies, is based on data collected in five leading metropolitan areas of the country (*2*). Two nationwide surveys of fertility, the "Growth of American Families" studies of 1960 and 1965 contained such a small sample of rural population and such an even smaller sample of poverty-rural population, that very little information is available in the two reports (*3*, *4*). (Italic numbers in parentheses indicate references listed at the end of this report.)

Summary of Findings to Date

To orient the reader, the following generalizations or assertions appear to be warranted from the research made thus far:

(a) The rural poor approve of family planning overwhelmingly. The notions of a "high fertility culture" cannot be supported by data.

(b) The rural poor will accept family planning service of a high quality when it is brought within their economic capacity and the limits of their ability to travel to a clinic for service.

(c) An impressively high proportion of the rural poor couples who accept modern family planning methods are able to continue the correct practice for sustained periods of time.

(d) Because of the first three findings, it is increasingly apparent that the birth rates of rural populations can be reduced much more rapidly and under much less promising conditions than previously had been thought possible.

(e) The provision of family planning services in rural poverty areas is accompanied by special problems which are either unique or are much more important than in an urban setting. None of these problems (described below) is insurmountable, however.

(f) Therefore, it is practicable, socially and economically profitable, and not especially difficult to launch family planning service in rural poverty areas with excellent prospect that it wil! be well patronized.

Description of the Experiment

The Alabama fertility study was an effort to inventory the attitudes, motives, and potential for family planning among a very rural and very poor population, and to accompany it with an experiment to see how acceptable modern contraception would be if offered in a way that rural people could accept and at a price they could afford. The State of Alabama offered an ideal opportunity for systematic research in this area. For more than two decades the Planned Parenthood League of Alabama has been cooperating with the Bureau of Maternal and Child Health of the State Health Department of Alabama to offer child spacing (family planning) services through the statewide system of health clinics. These clinics provide free or low cost medical care and health care to medically indigent families. Each county contains one principal health center and possibly one or more branch centers in outlying towns. Each county's work is under the direction of a medical officer, who has a staff of nurses and other employees to carry out the health and medical care program. The fact that for many years family planning has been a normal part of the health program throughout Alabama and is regarded by the clinic staff as part of its regular duties, was an important asset.

In each of the county clinics in Alabama, at least one clinic session per week is devoted to maternal health—prenatal or postnatal care. Free family planning advice and free supplies of the simpler methods of family planning (jelly, cream, aerosol foam) had been offered. Prior to 1964 the oral pills were not being used in substantial quantities in this program; the high cost at the prices then prevailing was one element in this policy. The family planning child spacing program of Alabama had been functioning quietly and smoothly during the 1950's and early 1960's. Although the annual caseload in each county was not large, either in absolute numbers or in relation to the number of fertile women of childbearing age residing in the county, the cumulative total for the entire State was impressive. During these years, family planning was a normal part of health service, without undue emphasis—it was allowed to fit in with the vaccination, nutrition, sanitation, infant care, and other health programs in accordance with the workload, resources, and interests of the respective medical officers and their staffs.

The study has been carried out in four phases as follows:

- Phase 1.—Pilot experiment in Bullock County.
- Phase 2.—Clinic-plus-education experiment in 13 Black Belt counties.
- Phase 3.—Followup of clinic and nonclinic samples in the Black Belt counties.
- Phase 4.—Intensive motivational work with apathetic and resistant families.

As of November 1967, the first three phases had been completed, and the experiment was in the fourth phase, supported by a grant from the Department of Health, Education, and Welfare. In this report, a section is devoted to three phases. The actions taken are described in some detail; summaries of data collected are presented, and the findings are synthesized.

Phase 1: The Pilot Experiment in Bullock County

In the spring of 1963 the Community and Family Study Center planned a pilot experiment in Bullock County, Ala. This county was selected because it was one of Alabama's poorest counties. The study was planned in two steps:

(a) Select a sample of households, interview the females of fertile ages, and provide them with free family planning supplies.

(b) Return after an appropriate period of time, reinterview the same families, and learn the reaction to family planning and extent of use of the contraceptives.

The sample consisted of 50 households, selected by a method of random area probability. The entire county was divided into 10 parts, and 5 households were to come from each part. Each of the 10 parts was divided into smaller segments. A sample of these segments was taken and a complete listing was made of the people residing in them. The sample households were then drawn from these listings. This assured wide geographic coverage of the county, and selection of households on a probability basis, with each rural household in the county having roughly equal probability of being selected. Maps provided by the U.S. Bureau of the Census were used in drawing the sample, and "key persons" in each of the sample segments were used to help compile the list of residences. This work was performed by the supervisor of interviewing at the Community and Family Study Center, who then proceeded to interview the respondents. If a sampled household did not contain a female of fertile age, another household was drawn from the same segment. This assured a total sample size of 50. The interview covered a wide variety of family planning topics. Cooperation was superb; there were no refusals. The interviewer, who was Negro also, quickly established rapport and obtained data which were highly consistent internally and which appeared to be a valid picture of the condition and attitudes of the respondents.

Eighty-eight percent of the women had been born and reared in Bullock County, and 90 percent had lived all of their lives either on a farm or in a small rural town. More than one-half of the households were sharecropper homes, and an additional 34 percent were homes of manual laborers. Nearly one-half of the husbands had not completed grammar school, and only 6 percent had graduated from high school. More than 50 percent of the families had incomes below $2,000, and 80 percent were below the national poverty line of $3,000.

When asked what was their "ideal" family size (the number of children they regarded as ideal), the mean number given was 3.3 children. Yet the mean number of living children reported was 5.0 for women of all ages and 5.9 for older women. Eighty percent of the women regarded themselves as fertile and capable of bearing additional children, while 12 percent reported themselves as "possibly sterile."

The materials for this survey were analyzed by Kronus(*1*).

Instead of simply asking the women whether they approved of family planning, a rather complete set of questions was asked that inventoried their motivations to bear large families or to curtail their fertility. Their responses to these questions were written out verbatim by the interviewer. The interviewer was then asked to rate the respondent in one of four categories. Experienced coders in the office read the verbatim responses and made an independent rating in terms of the same four categories. The results are summarized in table 1. Clearly, a majority of these poverty-stricken rural women were unambivalently in favor of small families and an additional sizable fraction were ambivalent—being able to see advantages in both high and low fertility. Only one-fourth or less could be said to be imbued with high fertility motives. A careful reading of the verbatim materials showed no element of hostility toward the idea of contraception, and very little resistance on religious grounds. Although the sample size is small, the great care with which it was drawn and the laws of sampling variability make it improbable that a complete 100 percent canvass of all rural residents of the county would reveal an attitude climate of high resistance to family planning. The results, moreover, were so very similar to data obtained in urban areas when the same questions were asked that it was concluded it would be a waste of scarce time and money to conduct a large-scale motivational survey. Instead, it was decided to launch into Phase 2, the action phase, immediately.

TABLE 1.—*Motivational "set" toward high and low fertility: 50 Negro respondents in Bullock County, Ala., September 1963*

[Percent of women]

Motivational set	Rated by interviewer	Rated by coder
Total	100	100
Favor low fertility, not ambivalent	54	56
Ambivalent, favor both high and low	18	30
Favor high fertility, not ambivalent	24	12
Inconsistent, illogical	4	2

At the time of the first interview, the couples were asked about their use of contraception. Sixty percent were using no method, and 26 percent had never used a method at any time in their lives. The reported use of contraception at the time of the survey was as follows:

Method	*Percent*
No method, fertile	42
No method, possibly sterile	20
Condom	18
Douche	8
Withdrawal	6
Aerosol foam	2
Birth control pill	4

Clearly, only about one-fourth of the couples could be said to be practicing family planning at a "modern" or "reliable" level.

At the conclusion of the first interview each woman was offered a free supply of aerosol foam and condoms, sufficient to last 3 months. All of the respondents accepted this gift. In January 1964—4 months after the first interview—the 50 women were again interviewed. (One woman who had migrated could not be contacted.) The primary purpose of this second interview was to find out what effect the first interview, with free contraceptives, would have upon family planning activity of the respondents.

Almost one-half of the women who were not pregnant or sterile had improved their family planning practice within this short time. These women abandoned withdrawal, douche, or "taking chances" by using no birth control and adopted the condom or foam that had been left with them. Those who adopted tended to be younger women and women with large families. Adoption tended to be better among those who had graduated from grammar school, and among those who had higher incomes. *But the adoption rate was more than 20 percent even among the lowest socioeconomic groups.*

Kronus found a significant relationship between adoption and attitudes expressed at the first interview. Women who were unambivalently in favor of small families, who regarded the small family as ideal, and who did not regard having a large family as a way of gaining security in old age were those who tended to adopt with greater frequency (*1, p. 157*).

At the time of the original interview, each woman was given a simply written booklet on family planning methods. At the second interview questions were asked to find out whether this booklet had been read and if so what relationship it bore to adoption. One-third of the women claimed to have read it all and an additional 10 percent had read some of it. The adoption rate was more than twice as high among the group that had read all of the booklet than among the groups which received the booklet but had not read any of it.

During the second interview the women were also asked about informal conversations about family planning they may have had with friends, relatives, or neighbors as a result of the first interview and the gift of contraceptives. More than one-third reported they had talked to three or more people; about one-third had talked to two persons; and about one-third had talked to one or no one. Adoption rates were significantly higher among those who talked to three or more persons than among those who talked to only one person or to nobody.

SUMMARY.—The results of this pilot test were most promising. They revealed a favorable attitude climate, a great willingness to accept new methods of contraception, and to use them promptly when made available. We found that a significant number of persons would read simply written instructions on how to practice family planning and that there was much spontaneous informal conversation among friends and neighbors—almost all of it apparently favorable to family planning—as a consequence of the experiment.

Two facts not previously mentioned but that also impressed us greatly emerged from this test. (a) Nearly 80 percent of the respondents of the Bullock County pilot study said they did not know that free family planning service was available at the local health clinic. Lack of information, rather than lack of desire, seemed to underlie a great deal of high fertility in Bullock County. Somehow, the facts of family planning and knowledge of available services had not managed to penetrate into the rural areas, despite many years of a nominal program. (b) Unorthodox marital arrangements did not appear to be a barrier to the adoption of family planning. Women who reported themselves as unmarried (single, divorced, separated, or widowed) but sleeping with "boyfriends" at the first interview adopted family planning or improved their practice just as readily as married couples living together. Thus, it appeared that family planning might help to contribute to the integrity of the Negro family; the unusual conjugal habits of southern Negroes would not necessarily lead to irresponsible parenthood if family planning were more readily available.

The Bullock County pilot test gave every indication that a larger stepped-up action program would be welcomed by the rural poor of the area. It was decided to begin immediately, without waiting for a more comprehensive motivational and attitudinal research project with a larger sample of respondents.

Phase 2: The Clinic-Plus-Education Experiment: 13 Black Belt Counties

As described above, the State of Alabama already had in operation a family planning program for its rural areas. The experiment proposed was to attempt to *accelerate* the participation of rural poverty families in the clinics that comprised this facility. The Bullock County pretest showed that only a comparatively small fraction of the population was making use of these facilities. A set of hypotheses was developed that might explain why this should be the case, and a program that corrected or removed the impeding factors was then designed. The accelerated family planning program was planned collaboratively by the Planned Parenthood League of Alabama, the Bureau of Maternal and Child Health of the Alabama Department of Health, and the Community and Family Study Center of the University of Chicago. It began operations in January 1964, and continued until July 1967.

Hypotheses to Explain Low Clinic Attendance by Rural Folk

Recognizing that the State of Alabama already had the largest family planning participation by rural poor of any State in the nation, and that the experiment proposed was simply to "improve upon a good thing" the following hypotheses were formulated to explain why the participation of rural couples was not even larger than it was:

(1) The public must be *sensitized* and *informed* before it will take action for family planning. Simply stocking contraceptives in a clinic and making administrative arrangements for them to be dispensed if requested does not automatically create a demand. The public must appreciate the benefits of family planning, must know what the modern methods are, must have confidence in their efficacy and their effect on health, and must have information about the service itself—where it is, when it is available, how much it costs, who is eligible, etc. Therefore, one way to accelerate the use of the family planning facility would be to organize a program to educate the public with respect to family planning.

(2) Regular clinic staff are overworked as a result of having to provide a great variety of services to a large clientele. Family planning is only one of several programs. It is also one that requires a substantial amount of time for explaining, teaching, and demonstrating the methods of family planning. The participants must return regularly and frequently for supplies. This *requires additional* time and much recordkeeping. As a result, the staff may not take advantage of all of the opportunities available to recommend family planning or to answer fully all of the questions that need to be answered before an interested client will adopt. One way to accelerate the clinical part of family planning would be to arrange to have some of the tasks performed by additional nonmedical personnel rather than loading them upon nurses and physicians.

(3) The clinic staff may not be fully convinced that family planning is an essential and important part of their duties. They may be giving a lower priority to this type of activity because they do not see the close connection between community and family problems and excessive childbearing. One way to accelerate the program would be to have orientation meetings for family planning, in which the importance of providing family planning as a community service would be stressed. Such meetings should have as a goal a rise in enthusiasm and desire to "push" family planning services as a priority program.

(4) The clinic staff may not be fully informed about how to provide family planning services in a way that is persuasive. Many medical services are dispensed in a formal and impersonal way. Such an atmosphere probably would not be effective with rural folk of low education and income. The skills of warm and sympathetic interpersonal relations, of health education, and of medical counseling need to be employed. The clinic staff should be educated in these skills.

(5) Many women may feel shyness, shame, or embarrassment at the thought of coming to a family planning clinic. This may keep them away. Some way should be found to contact them and persuade them beforehand; the offer of service should be initiated by the family planning facility; people should not be forced to ask for help.

(6) Even though they are poor, those who seek family planning service desire methods that are reliable and not unpleasant to use. The family planning services should be of high quality. They should include only reliable methods and good professional care.

(7) When the persons to be reached are of very low education, income, and of a different racial or ethnic group there may be a large social and cultural gap separating the physician and nurses at the clinic and the potential clients. In such cases, the gulf must be bridged by an intermediary who can communicate effectively with both sides; who can translate the family planning messages into language the client can understand and use arguments that will convince the client. On the other hand, the intermediary must work under the supervision of the medical staff and carry out the program as it directs.

(8) The groups being served should be represented among those sponsoring the family planning program. Suspicions arise concerning the motives that cause some people to want other people to have fewer children. The best way to demonstrate sincerely that the welfare of the client and his family is the primary goal is to have the leadership of the clients' own groups represented as a part of the family planning program.

(9) Under the pressures of prolonged hard work with few expressions of gratitude, clinics may tend to become bureaucratic, impersonal, and even hostile toward their clients. Family planning can thrive only in an atmosphere of personal concern and sympathetic handling of each case. The family planning portion of each clinic's program must be examined to see if it should be more "humanized" or "personalized."

(10) Many uneducated persons may be obsessed with the need for privacy and confidentiality because they do not wish their neighbors to know that they are practicing a particular type of family planning. The service provided should be given in as much privacy and freedom from public knowledge as possible.

(11) Coming to the family planning clinic may require special arrangements of a rather complex nature for women with large families who live at a great distance, or who work. The clinic must be prepared to accommodate the needs of the people, to reduce the frequency of their return as much as possible, and to facilitate the delivery of supplies to them. One policy would be to give enough supplies at one time to last several months, to arrange for delivery by mail, etc.

(12) The operating routine of some clinics may be objectionable. Having to wait for a long period of time, having to give out personal information in the presence of other clients, or having clinic workers presume that their clients are unintelligent, dis-

honest, or otherwise inferior may generate such active dislike that they will stay away. Family planning must rely upon voluntary attendance. The clinic operations should be reviewed to minimize practices and procedures that alienate clients.

Content of the Program

In order to create a program that would avoid the 12 handicaps listed above, a program with the following components was developed:

(1) *An indigenous family planning educator should be added in each county.* Each county should recruit and employ a "family planning educator" to work with the county health officer and his staff. This person should work to help relieve the added burden of the accelerated family program. She should also be a "bridge" between the potential clients and the clinic. Inasmuch as almost all of the clients in the clinics are Negro in the area being served, the family planning educator must be a Negro also. She should be widely known in the community and liked and respected. She must have talents for counseling and talking informally with clients. She should be known to the leaders of the Negro community and have influence with them.

These family planning educators were part-time workers employed by the Planned Parenthood League of Alabama to work 1 day per week. Their principal duty was to attend one session of the prenatal and post-partum clinics in the county and to hold conversations about family planning with women who came to the clinics. They were supplied with easy-to-read booklets that give full information about each of the methods of family planning, which could be given to the women to read at home. The family planning educators were also expected to assist the nurse in dispensing family planning supplies, keeping records, and banking the funds collected from the clients as partial payment for supplies.

(2) *There should be a sustained program of public information in the communities.* In each county, the family planning educator was asked to compile a list of names of women of childbearing age who recently had borne a child. In some cases these names were taken from the birth registration files for the county, and in others they were taken from clinic records of women who had received medical care in connection with a pregnancy. A letter was mailed to each person on the list, enclosing a simple booklet announcing the program and inviting them to come to the clinic. The name of the family planning educator was announced in the letter and interested women were encouraged to talk with her.

Because a high percentage of those to be served are Negro, a special effort was made to help Negro citizens realize that a person of their own race had been employed as a family planning educator and that the program was one that would benefit them. Each educator was asked to have a business card printed with her photograph on the card. In this way, a substantial segment of the Negro community came to know that their race was represented at the clinic as an employee, and that they were welcome to visit her and ask questions or seek help.

(3) *Planning and orientation sessions should be held for the clinic staffs.* A general planning meeting, attended by the county health officers and their head nurses, was held at the start of the program. The details of the program were described and discussed, and suggestions from the participants were incorporated as a part of the program. The Planned Parenthood League of Alabama held meetings for the staffs in the various counties, to explain the purpose of the program and to help prepare the way for the family planning educator to join the organization. The system of records to be kept was explained, the procedures were discussed. General discussion revealed the problems that would be encountered and suggested solutions were worked out.

(4) *Training and supervision of the family planning educators.* The Planned Parenthood League of Alabama undertook to assist the nurses and health officers to train the family planning educators in their duties. Representatives of the League visited each county and reviewed the duties of the family planning educator with the recruit herself and the head nurse. An experienced family planning social worker from the Birmingham Planned Parenthood Program (also a Negro) visited each new family planning educator individually and coached her on her duties. She helped the educator work out detailed procedures with her supervisors for getting additional service performed with a minimum of confusion. Arrangements whereby the educators could facilitate the delivery of supplies to established clients was worked out.

(5) *Community work by the family planning educators.* Because of limited budget, the principal duties of the family planning educators were concentrated at the clinic, counseling women who came for other medical visits. However, a limited budget for travel was provided each educator and she was encouraged to talk to her neighbors and friends, to give talks before public gatherings, and to visit other towns in the county to talk with community leaders about the program. In other words, an effort was made to establish her as an "opinion leader" in the community.

(6) *The oral pill should be added to the methods available, at subsidized cost.* Whereas the oral pill had previously been available only under special circumstances, under the accelerated program it was offered to everyone at a cost of 50 cents per month. In addition, aerosol foam was available without charge and the intrauterine device was available in some of the clinics. It was decided to ask the clients to pay for a part of the oral pills for two reasons. First, at the time the program began the pills were available to the program at a cost of $1.10 per month's supply. The funds avail-

able for the experiment were insufficient to provide the pills without charge. Second, it was believed that asking the interested couples to pay something for family planning would have two beneficial effects. It would require a personal commitment to make a serious effort to control conception. People who would pretend to adopt in order to please the family planning educators were eliminated from the program. In addition, it was hypothesized that the policy of requiring a partial payment would be an effective barrier against propaganda that the program was only a device for maintaining a "racial balance" in the South. The cost of the pill to the clients was far less than the additional monthly cost of having an additional child. Moreover, no client need be without family planning, for the aerosol foam and IUCD were available to those who wished to have family planning but could not afford the 50 cents per month.

The Site of the Experiment

The experiment was conducted in 13 counties of the Black Belt (old plantation zone) of Alabama. These are among the poorest counties of Alabama and also of the nation. Figure 1 indicates the location of these counties; they lie along the belt of dark soil (for which the Black Belt is named) that traverses the State at about the latitude of Montgomery. It was here that the plantation system was most elaborately developed, and where later a very dense Negro sharecropper population was concentrated.

The counties included in the experiment have the following characteristics:

(a) They are predominantly rural—69 percent.

(b) The proportion of Negroes is very high—64 percent.

(c) The level of education is low; median years of schooling is 5.5.

(d) The population is very poor; median family income is $1,362.

(e) The population is unskilled; 61 percent of employed are farm or laborer.

(f) Fertility rates are very high—twice the U.S. level.

(g) Contacts with the modern world are minimal; 96 percent were born in Alabama; mobility is low except for permanent outmigration.

Table 2 presents selected characteristics of each county, taken from the 1960 census reports, while figure 2 illustrates the very sharp differences in socioeconomic status between these counties and the average level of the U.S. population. These data show that the clinic-plus-education experiment was situated in one of the most rural, least educated, most provincial, most poverty-stricken and backward segments of the United States, and one where birth rates are extremely high. It seems plausible to infer that *if a family planning experiment could succeed here, it could succeed in any rural area in the United States.*

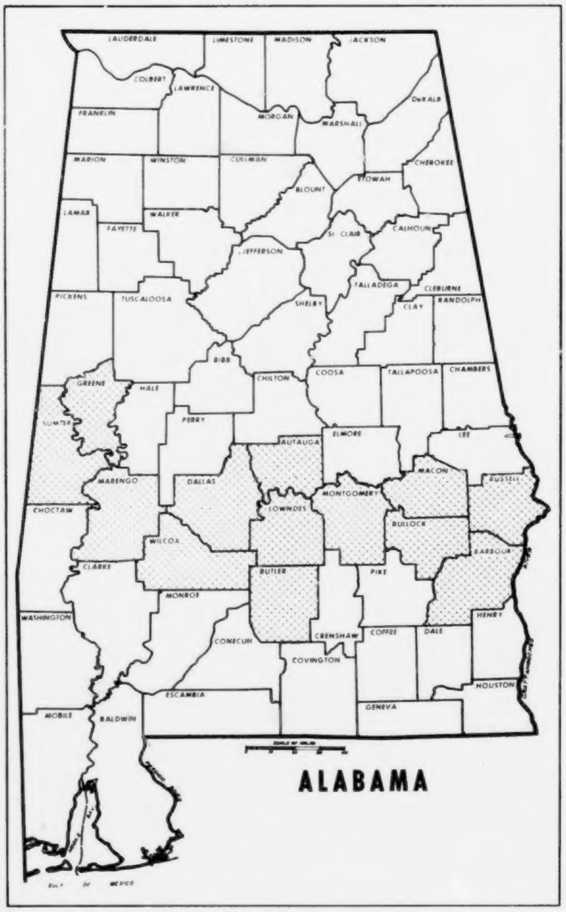
LAUDERDALE
LIMESTONE
MADISON
JACKSON
COLBERT
LAWRENCE
DeKALB
FRANKLIN
MORGAN
MARSHALL
MARION
WINSTON
CULLMAN
CHEROKEE
BLOUNT
ETOWAH
LAMAR
FAYETTE
WALKER
ST. CLAIR
CALHOUN
JEFFERSON
PICKENS
TUSCALOOSA
TALLADEGA
CLEBURNE
SHELBY
CLAY
RANDOLPH
BIBB
GREENE
HALE
CHILTON
COOSA
TALLAPOOSA
CHAMBERS
SUMTER
PERRY
AUTAUGA
ELMORE
LEE
MARENGO
DALLAS
MACON
RUSSELL
MONTGOMERY
LOWNDES
CHOCTAW
BULLOCK
WILCOX
BARBOUR
CLARKE
BUTLER
PIKE
MONROE
WASHINGTON
HENRY
CRENSHAW
COFFEE
DALE
CONECUH
COVINGTON
HOUSTON
ESCAMBIA
GENEVA
MOBILE
BALDWIN
ALABAMA
GULF OF MEXICO

FIGURE 1.—Counties in the Old Plantation Belt included in the family planning program.

Results of the Clinic-Plus-Education Experiment: Clinic Attendance

In the experimental 13-county area there was an immediate and very substantial rise in the number of new patients coming to the clinics when the program of accelerated action was introduced. The statistics of clinic attendance are reported in table 3 and illustrated in figure 3. At the end of 18 months, the rate at which new patients were coming to the clinic was 3.7 times what it had been before the start of the program. The number of old clients returning for supplies was 2.8 times as great as it had been before the start of the program.

There was no corresponding effect upon the remainder of the State during the first quarter of the

TABLE 2.—*Demographic, social, and economic characteristics of the 13 "Black Belt" counties of this study in comparison with Alabama and the Nation*

County or area	Entire county					Characteristics of the nonwhite population, 1960									
	Population in 1960 (000)	Percent rural 1960	Percent nonwhite 1960	Percent change 1950–60		Residence			Median years of school completed by adults	Percent born in Alabama	Percent migrants between 1955 and 1960	Children ever born per 1,000 ever married 35-44	Percent employed males farmers farm labor and laborer	Median family income	Percent families with incomes below $3,000
				White	Nonwhite	Percent urban	Percent rural nonfarm	Percent rural farm							
Autauga	18.7	64.7	42.2	+10.3	−5.5	20.5	54.1	25.4	5.6	97.6	6.6	5,546	61.7	$1,436	84.4
Barbour	24.7	66.2	52.0	−12.0	−16.7	27.8	42.3	29.9	4.7	95.0	4.3	5,053	60.5	1,155	85.6
Bullock	13.5	72.5	71.9	−10.8	−18.1	23.8	39.6	36.6	5.2	97.5	5.2	5,168	67.4	901	90.0
Butler	24.6	71.9	44.7	−15.8	−16.2	24.9	56.1	19.0	5.2	98.1	4.4	5,294	59.4	1,345	90.9
Dallas	56.7	49.9	57.7	+21.5	−10.5	42.8	30.5	26.8	5.8	97.7	5.8	4,435	56.0	1,393	84.3
Greene	13.6	79.5	81.3	−9.1	−19.2	15.1	43.2	41.7	5.0	98.5	4.7	5,149	75.9	971	88.5
Lowndes	15.4	100.0	80.7	−7.4	−16.0	0.0	57.4	42.6	5.1	98.6	4.0	5,551	79.6	935	87.9
Macon	26.7	86.7	83.5	−7.8	−13.5	25.5	54.4	20.1	7.5	82.3	17.2	4,103	41.5	1,904	64.1
Marengo	27.1	63.5	62.1	+13.8	−17.8	27.7	44.5	27.8	5.3	98.3	5.0	5,123	69.0	1,214	86.5
Montgomery	169.2	15.6	38.3	+33.4	+6.8	75.0	17.7	7.3	6.9	95.8	8.6	3,382	37.0	2,184	68.6
Russell	46.4	40.4	49.6	+20.7	+9.4	44.3	36.7	19.0	4.7	92.9	6.8	4,460	41.4	2,100	71.5
Sumter	20.0	85.4	76.3	−16.1	−14.8	10.7	46.2	43.1	5.0	95.0	5.5	5,399	72.9	1,087	88.6
Wilcox	18.7	100.0	77.9	−15.7	−21.4	0.0	58.5	41.5	5.5	99.0	3.5	5,942	71.2	1,081	89.8
Average, 13 counties	36.6	68.9	62.9	+15.4	−8.5	26.0	44.7	29.3	5.5	95.9	6.2	4,970	61.0	1,362	83.1
State of Alabama (Total population)	3,266.7	45.2	30.1	+9.8	+0.1	55.0	32.7	12.3	9.1	85.4	15.2	3,072	22.7	$3,937	39.1
United States total (white population)	158,837.7	30.5	...	+17.9	..	69.5	23.0	7.5	10.9	66.5	19.6	2,575	13.6	$5,893	18.6

Source: *1960 Census of Population.*

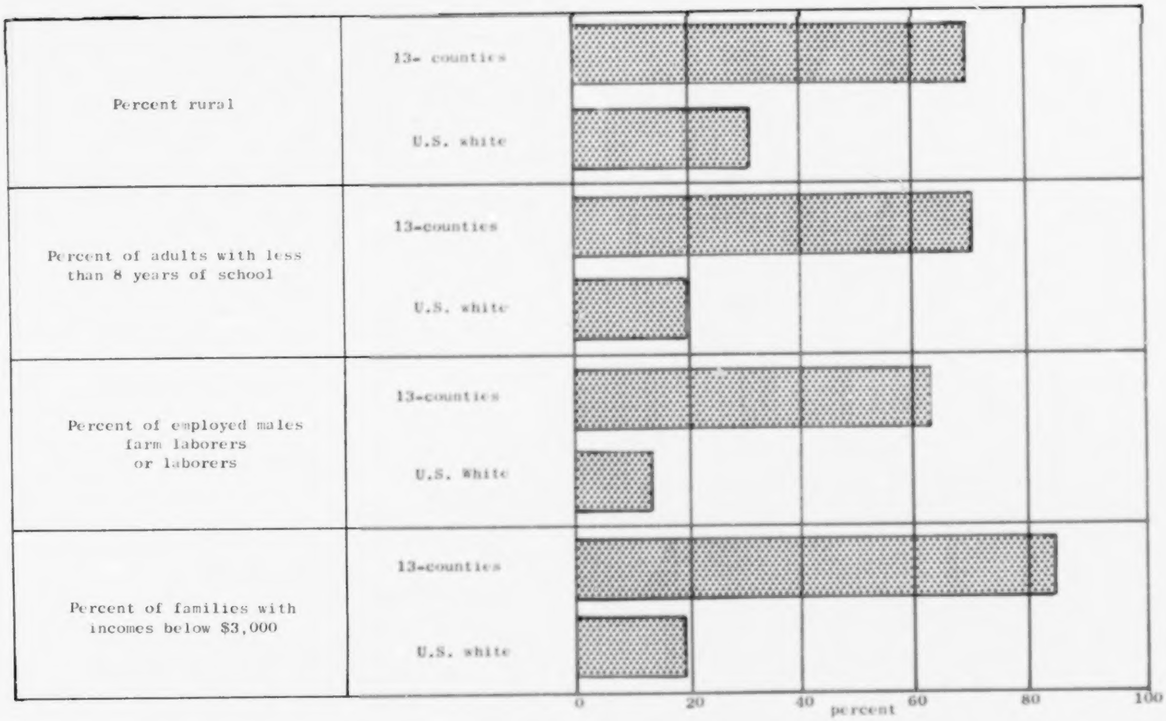

FIGURE 2.—Characteristics of the nonwhite population of 13-county Old Plantation Belt area compared with U.S. white population: 1960.

experiment. Whereas the attendance at the clinics in the 13-county area and the balance of the State (exclusive of Jefferson County, which is the Birmingham metropolitan area) had been about equal throughout 1963, the attendance in 1964 jumped to a point 40 percent and then 80 percent above the remainder of the State. From the fourth quarter of 1963 to the second quarter of 1964, the rate of inflow of new patients for family planning increased 126 percent. The corresponding increase for the remainder of the State was 44 percent. Table 4 presents these data.

TABLE 3.—*Number of new patients for family planning in public health clinics in Alabama, by areas: 1963–66*

Year and quarter	Total in State	13 county area	Jefferson County	Remainder of State	Ratio: 13 counties to remainder
1966:					
3d quarter	3,025	980	546	1,499	0.7
2d quarter	3,451	1,092	762	1,597	0.7
1st quarter	8,823	2,769	1,974	4,080	0.7
1965:					
4th quarter	3,231	869	687	1,675	0.5
3d quarter	[1]	[1]	[1]	[1]	[1]
2d quarter	3,350	1,093	869	1,388	0.8
1st quarter	5,482	1,903	1,773	1,806	1.1
1964:					
4th quarter	2,105	573	695	657	1.2
3d quarter	1,999	781	548	670	1.2
2d quarter	1,922	795	672	455	1.8
1st quarter	1,589	554	650	385	1.4
1963:					
4th quarter	944	344	283	317	1.1
3d quarter	1,015	343	387	285	1.2
2d quarter	1,099	385	292	422	0.9
1st quarter	1,284	407	484	393	1.0

[1] Not available.

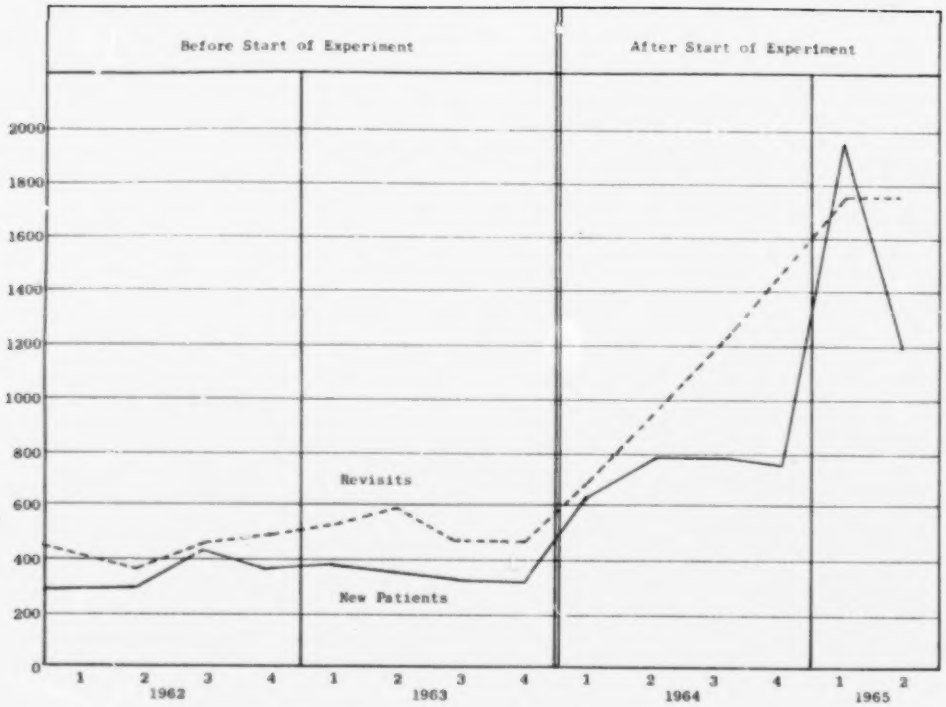

FIGURE 3.—Number of new patients and number of patients returning for supplies at the health clinics of the 13 counties in the experimental program, by quarters: 1962–65.

A similar sudden increase was registered for the number of visits by patients returning to the clinics for family planning service—to obtain supplies primarily. From the fourth quarter of 1963 to the second quarter of 1964 the increase was 108 percent for the 13-county area and only 15 percent for the remainder of the State.

It had been intended to use the remainder of the

TABLE 4.—*Number of visits to clinics by patients returning for service, public health clinics in Alabama, by areas: 1963–66*

Year and quarter	Total in State	13 county area	Jefferson County	Remainder of State	Ratio: 13 counties to remainder
1966:					
3d quarter	18,164	5,201	4,186	8,777	0.6
2d quarter	17,584	4,997	4,501	8,050	0.6
1st quarter	16,082	4,499	4,197	7,386	0.6
1965:					
4th quarter	15,581	4,428	4,241	6,889	0.6
3d quarter	(1)	(1)	(1)	(1)	(1)
2d quarter	12,354	3,673	4,082	4,599	0.8
1st quarter	9,844	3,373	3,148	3,323	1.0
1964:					
4th quarter	7,757	2,973	2,430	2,354	1.3
3d quarter	5,966	2,505	1,745	1,716	1.5
2d quarter	4,395	1,868	1,411	1,116	1.7
1st quarter	3,578	1,336	1,241	1,001	1.3
1963:					
4th quarter	2,653	898	779	976	0.9
3d quarter	2,855	993	826	1,036	1.0
2d quarter	3,349	1,242	1,062	1,045	1.2
1st quarter	3,163	1,058	1,030	1,075	1.0

---

[1] Not available.

State, exclusive of the 13-county area and Jefferson County, as the "control" by which to measure the progress of the program. However, this control was lost after only two quarters of operation. Three events conspired to produce this:

(a) The Planned Parenthood League of Alabama and the Community and Family Study Center jointly issued a "Rural South Family Planning Newsletter" in which the experiment was described in detail. This newsletter was published and distributed to every county health department in multiple copies, so that almost every employee in the health establishment of the State became aware of the 13-county experiment in June 1964. Copies were also sent to every county school superintendent in the State and to the ministers of the leading churches.

(b) At the annual conventions in the State of physicians, nurses, and social workers, announcements of the program were made, and lectures were given stating the goals of the program and the procedures being followed.

(c) The State of Alabama changed its policy with respect to the oral pills, and began to make them freely available *without charge* in all counties of the State *except* the 13-county area of the experiment, where the price of 50 cents per cycle remained in effect.

Thus, the experiment suddenly became a "pacer" for the health departments in all counties of the State. There was a sudden and dramatic increase in the inflow of new patients to the nonexperimental counties beginning in the second quarter and increasing in the third and subsequent quarters. However, the "control" situation lasted long enough to make it unmistakably clear that the experimental effort to accelerate the program had succeeded. When the procedures of the experimental acceleration were diffused to the remainder of the State, a similar effect was produced.

Tables 3 and 4 report trends in new patient visits and revisits of old patients for nearly 3 full years of operation of the program. The number of new patients climbed irregularly to a peak in the first quarter of 1966. Since that time it has tended to level off at a rate roughly three times the volume that prevailed before the experiment began. The number of revisits has continued to climb steadily. The volume in 1966 third quarter was 5.8 times the volume in the quarter immediately preceding the experiment. There can be no doubt that these poverty counties of rural Alabama have accepted family planning at a greatly accelerated rate.

Meanwhile, the adoption of family planning has also proceeded rapidly in the balance of the State. Tables 3 and 4 reveal that the inflow of new patients and the return of old patients has grown even more rapidly than in the experimental area. In 1966 the volume of family planning activity throughout the State stood roughly at a level seven times what it had been just before the experiment began.

Two factors must be considered in evaluating the growth of family planning in the experimental counties and is the remainder of the State:

(a) The experimental area was deliberately chosen for being the poorest and most rural segment of the State. The very rapid progress in the outlying counties may be due in part to the fact that they have a higher level of education and income and that their population is less predominantly Negro.

(b) In the remainder of the State the oral pills were available without cost, whereas in the experimental counties the 50-cent charge was continued until July 1967. This may have repressed adoption somewhat in the experimental counties. (In July 1967, when Phase 4 began, the pills were made available without cost in the experimental areas also. Data are not yet available to measure the impact, but it may be regarded as a test of the comparative influence of making a charge and not making a charge for family planning when attendance rates are reported.)

Tables 3 and 4 were summarized from quarterly reports made by the county health officer to the State Department of Health. In mid-1965 the Planned Parenthood League of Alabama summarized the records it had kept of attendance at the clinics, counting the number of women who had applied for family planning service, even if one time only, since the program began. Patients who returned for service during the first quarter of the experiment were included in this total. The summary of this statistical report is shown in table 5. Data are given for each county and for the experimental area as a whole. A total of 5,196 women had been served during the first 18 months of the experiment. This was equivalent to an estimated 11 percent of all women of childbearing age, 18 percent of all ever married women of childbearing age, and 25 percent of all women of childbearing age with 2 or more children.

Table 5 demonstrates that in a very short time the program had succeeded in reaching a very substantial percentage of the estimated 29,000 ever married females in the experimental area. However, it was also clear that *as yet the majority had not been persuaded to try family planning by using modern methods.* Even if we presume that 30 percent are using methods purchased at pharmacies and 20 percent are sterile or not exposed, this still leaves at least 30 percent of the population unprotected and as nonadopters, and with a substantial additional number using unreliable methods. The fact that revisits have climbed steadily since mid-1965 suggests that steady inroads are being made upon this backlog, perhaps at the rate of about 750 new permanent adopters per year. If the goal is to have 80 percent of all women who have borne two or more children using contraception if they are fertile, and if there are an estimated 16,000 such women, the current rate of progress seems to be about 5 percent per year. Although this is far more rapid than had been the pace previously, it could probably be accelerated further by larger inputs of manpower. However, if the current rate of growth continues for another decade or 15 years, the target will have been very nearly achieved. *When one considers the low level of education, the rurality, the poverty, and the small input of additional manpower and money, this accomplishment is encouraging.*

Not all of the counties in the program performed equally well. In fact, some did outstanding work and a few appeared to accomplish almost nothing. This is revealed in table 5, where measures are reported for each county. If one correlates these intercounty differences with the characteristics shown in table 2, the following findings result:

(1) Some of the most successful counties are the most rural, the poorest, and the least educated. Adoption rates are lowest in the more urbanized counties with better education and higher incomes (Russell, Montgomery). This may be due in part to the fact that these more urbanized populations use other sources to get family planning service—pharmacies and private physicians. It may also mean that in larger urban clusters the number of clinics is insufficient, and services should be more widely dispersed.

(2) Some of the poorest as well as some of the best showings are in very rural and poor counties (Sumter, Wilcox, and Greene are below average, while Bullock, Lowndes, and Macon are above average.) Thus, there is great variation even among counties of the same general type.

(3) Racial tension and friction affected the program very little. Dallas, Lowndes, and Macon Counties all were at the very center of racial upheavals during the course of this experiment, yet all are among the more successful. The experiment has been conducted in such a way that the Negro residents have not linked it with race problems; it has remained a family welfare-health service provided to all citizens irrespective of race. It is believed that the physicians and nurses in these counties conscientiously carry out this philosophy, with only occasional exceptions. The presence of the Negro family planning educators at the clinics and working in the community should have helped to maintain this philosophy. Moreover, the Negro citizens appeared to realize that the family planning program was to their own long-run advantage.

The above interpretation concludes that the degree of success achieved in the counties was not "caused" by superior education, higher income, or greater urbanism. Where, then, should we look for an explanation? Only informal observation and impressions are available for such a task. If these subjective judgments can be trusted, we may formulate the following explanatory hypotheses:

(1) The degree of interest and enthusiasm which the county health officer and his (white) nursing staff showed in the program affected the outcome greatly. The outstanding case of Autauga County must be credited to the devoted activity of the nurse, Edna E. Tucker and the family planning educator, Ruby Lee Smith. The county health officer gave them strong backing in their efforts.

(2) The qualifications of the Negro family planning educator affected the outcome. Those who were most enthusiastic, outgoing, and energetic in contacting persons both in the clinics and out in the communities apparently had a big impact. Those who were more passive and indolent, or who merely were assigned to doing minor chores around the clinic without doing a great deal of true educational work achieved much less by way of an acceleration in clinic attendance.

TABLE 5.—*Number of nonwhite women exposed to pregnancy and rate of clinic attendance*

County	Number of nonwhite women			Number adopters July 1, 1965	Adopters as percent of—			Rank
	Total 15 to 44 years	Ever married women 15–44 years	Ever married women 15–44 with 2 or more children		All women	Ever married women	Women with 2 or more children	
Autauga	1,386	838	615	498	36	59	81	1
Barbour	2,400	1,461	1,076	303	13	21	28	6–7
Bullock	1,616	959	739	316	20	33	43	2
Butler	1,991	1,206	892	200	10	17	22	8–9
Dallas	5,848	3,582	2,576	808	14	23	31	5
Greene	1,788	1,050	803	179	10	17	22	8–9
Lowndes	2,121	1,239	997	354	17	29	36	4
Macon	4,451	2,359	1,608	454	10	19	28	6–7
Marengo	2,791	1,769	1,323	537	19	30	41	3
Montgomery	13,346	8,622	5,542	1,018	8	12	18	11
Russell	4,741	3,234	2,209	167	4	5	8	13
Sumter	2,500	1,567	1,206	156	6	10	13	12
Wilcox	2,381	1,317	1,025	206	9	16	20	10
Total, 13 counties	47,360	29,203	20,561	5,196	11	18	25	...

(3) The latitude for teaching and motivational work which the county health officer and the nurses gave to the family planning educator, and the degree to which the family planning educator tried to become a genuine "team" member, also affected the outcome. Where the family planning educator was simply turned into a nurses aid, a recordkeeper, or a keeper-and-dispenser of supplies, the impact was much less than where she was given latitude to talk with the patients freely and become a true educator for family planning.

(4) The general acceptance of the clinic by the community for all medical services is another factor. In some counties the clinics are used to capacity and beyond, because the Negro residents have confidence in them and like the treatment they receive. In other counties this appears to be less true. In counties where the maternal and child health care program is not very popular and is not much used, there were comparatively fewer women to contact for family planning.

(5) In some counties much use was made of the booklets and other materials for training and educating the public, while in other counties much less use was made of them.

In summary, the counties which conformed most closely to the original experimental design appear to be the counties which succeeded best, and the counties which "dragged their feet" in carrying out the experiment appeared to have the least success.

CONCLUSION—The statistics on attendance appear to demonstrate beyond reasonable doubt that family planning services can be offered through public health clinics to families of very low income and very low educational attainment in very backward rural areas and yet receive a prompt and substantial acceptance if that program is accompanied by an appropriate set of arrangements to inform and motivate the public for family planning, and to persuade them to make a trial. It also demonstrates that simply operating a medical service without a program of education (depending upon the word-of-mouth recommendations of satisfied customers) tends to have comparatively less success. Finally, it demonstrates that the behavior of the rural poor with respect to family planning conforms much less to the stereotypes of apathy, irresponsibility, and unconcern for high fertility which many middle-class white persons attribute to them.

Yet it was also clear that this experiment did not produce immediate and complete success. For every woman of childbearing age with two or more children who was won over to the sustained practice of family planning during the 3½ years in which this program operated, there probably was at least one such woman who was not practicing family planning at all or was using only unreliable methods. Clearly, the task is unfinished, from both the research and the action side. We need to learn more about the phenomenon of non-acceptance. This was the object of Phase 3, to be discussed next. We then need to utilize this information to devise a new and even better program to reach the "hard to persuade." This is the goal of Phase 4.

Phase 3: Followup of the Clinic-Plus-Education Experiment

After the clinic-plus-education experiment had been in operation for 2½ years, it was subjected to an intensive followup evaluation. This consisted of three parts:

(a) An interview with a sample of women who attended a family planning clinic at least one time. The interview obtained information concerning the practice of contraception over the past 5 years, a complete pregnancy history with which to estimate birth rates, and a wide variety of responses which would reveal attitudes toward fertility and fertility control or which would explain fertility behavior.

(b) An interview with a sample of women who *had not* attended a family planning clinic. The same items of information were obtained for this group as for the clinic sample.

(c) An intensive analysis of the clinic records for the women who had attended. This included an analysis of the types of contraceptives taken, duration of use, frequency of returning for supplies, reasons for termination (if terminated), etc.

The first of the above groups is referred to as *"the clinic sample."* It contains data for 470 women. The sample was selected by taking the name of every fifth person on the roster of those who had attended the family planning clinics in eight rural counties: Autauga, Bullock, Butler, Dallas, Lowndes, Macon, Russell, and Wilcox. Montgomery County was omitted from the followup because of its more urban nature. The remaining counties were excluded for one of two reasons: (a) It proved to be impossible to employ qualified Negro interviewers to do the followup work (Barbour County) or (b) the great distance from centers where interviewers were being trained and supervised (Selma on the West and Tuskegee on the east). Sumter, Greene, and Marengo Counties were excluded on this basis.

The second of the above groups is referred to as *"the nonclinic sample."* It consists of data for 368 women who had not attended the family planning clinic. These women were selected on the basis of a random process in the same counties from which the clinic sample was drawn. The procedure was as follows: In each county the interviewers were assigned five geographic points, distributed throughout the county to cover all districts. Starting at each point and following a path specified carefully in advance, the interviewers called at every second house, using a simple "screening" interview to find out whether the women in the house were of fertile age and had attended a family planning clinic. If at a house the woman or women were not of fertile age

(18 to 40) or had ever attended a planned parenthood clinic anywhere, they were excluded from the sample. However, all women age 18 to 40 who had never attended a clinic to obtain family planning service were included. The interviewers were instructed to continue screening and interviewing the selected cases until they had obtained a quota of 10 women at each sample point, for a total of 50 women for the county. Some women were unable to obtain the quota of 50 women by the screening process (sickness, inability to find the quota within the zone assigned, inability to find an interviewer to complete the quotas at outlying counties.)

The second sample was administered the same interview as the first. Therefore, we have two sets of data about two distinct groups of persons: *adopters* and *resisters*. By making a comparative analysis of these data, we can gain insights into the forces that promote and the forces that impede adoption of family planning in poverty areas.

Demographic and Background Characteristics

Table 6 summarizes data from these two samples. It presents information concerning demographic and background characteristics.

(a) *Age.* Most of the respondents are between the ages of 20 and 39. There is no significant difference between the clinic and nonclinic samples.

(b) *Marital status.* Only about two-thirds of the women were married and living with husband. A sizable proportion were separated or single; only a small fraction were widowed or divorced. There was no significant difference between the two samples.

(c) *Husband's education.* If there was a husband or boyfriend in the household, his educational attainment was noted. Educational attainment is low; there is no significant difference between the two groups.

(d) *Wife's education.* Wives had more education than their husbands, but the level is still far below the national average. There was no significant difference between the clinic and nonclinic group.

(e) *Employment status of husband.* The unemployment rate of males was high, but there was no significant difference between the two samples.

(f) *Employment status of wife.* Women who were in the clinic sample were employed in a slightly higher percentage of cases than those in the nonclinic sample, while those in the nonclinic sample tended to be unemployed. The differences are statistically significant, but bear little relationship to any meaningful hypothesis pertaining to adoption of family planning.

(g) *Family income.* The income of both groups was tragically low, but there was no significant difference between them. The clinic group tended to be a little more poverty stricken than the other group, but the difference was small.

(h) *Age at first marriage.* Marriage tends to occur early in rural Alabama, but this trait was present for both samples, and there was no significant difference between them in this respect.

(i) *Where brought up.* Of the women in the clinic sample, three-fourths had been brought up on a farm, whereas only 66 percent of the nonclinic sample had been farm girls. This difference is statistically significant, but runs completely contrary to the usual hypotheses concerning the relationship between fertility and urban-rural origin. It probably is a byproduct of the fact that different systems of sampling were used to obtain the two samples, and the nonclinic sampling procedure may have taken a more urban-oriented sample.

(j) *With whom lived as a child.* As has been found by other studies, only about 60 to 65 percent of Negro children have the privilege of growing up in a household where both parents are present. The rest are reared by their mothers or grandmothers or another relative. This situation characterized both samples, and there was no significant difference between them in this regard.

(k) *Time lived in cities.* Surprisingly, a high proportion of the women in both samples had lived in a "city" for a substantial amount of time. In almost all cases this meant the local county seat, Montgomery, or a nearby small city. There was no significant difference between the two groups in this respect.

(l) *Occupation of husband.* The husbands (or boyfriends) in both groups were predominantly blue collar workers, and farm employment was the source of livelihood for more than one-half of them. Although the differences are statistically significant, their pattern forms no meaningful explanation.

Summary.—Twelve demographic and background characteristics have been considered. Not one of them shows a statistically significant and meaningful difference between the sample of family planning adopters and family planning resisters. We must look elsewhere for an explanation of why some people accept family planning and others do not.

TABLE 6.—*Demographic and background characteristics of adopters and nonadopters of family planning; Alabama old plantation belt, 1966*
[Data in percent]

Characteristic	Clinic sample	Nonclinic sample
Age of woman (N8)	100.0	100.0
15–19 years	5.2	7.2
20–24 years	20.0	20.9
25–29 years	24.4	19.8
30–34 years	20.0	18.9
35–39 years	17.7	18.1
40–49 years	12.7	15.2
Marital status (N8)	100.0	100.0
Single	16.6	19.2
Married	65.7	63.3
Separated	10.9	12.9
Widowed	5.3	4.0
Divorced	1.4	0.6

TABLE 6.—*Demographic and background characteristics of adopters and nonadopters of family planning; Alabama old plantation belt, 1966*—Continued

[Data in percent]

Characteristic	Clinic sample	Non-clinic sample
Husband's education (NS)	100.0	100.0
0–4 years	14.8	18.4
5–7 years	31.4	28.2
8–11 years	35.3	33.2
12+ years	18.5	19.9
Wife's education (NS)	100.0	100.0
0–4 years	4.8	7.1
5–7 years	21.5	22.4
8–11 years	52.3	51.2
12+ years	21.5	19.4
Employment status of husband (NS)	100.0	100.0
Employed	88.5	89.6
Unemployed	9.2	8.1
Not in labor forced	2.3	2.3
Employment status of wife (Sig.)	100.0	100.0
Employed	38.8	35.2
Unemployed	23.4	34.0
Not in labor force	37.8	30.8
Family income (NS)	100.0	100.0
Under $1,500	38.0	34.7
$1,500 to $2,999	35.1	33.2
$3,000 to $4,499	18.5	22.9
$4,500 to $5,999	4.2	5.2
$6,000 or more	4.2	4.0
Age at first marriage (NS)	100.0	100.0
11–14 years	6.8	7.7
15–16 years	14.2	13.1
17 years	13.0	10.3
18 years	10.0	10.6
19 years	9.8	8.6
20–21 years	13.4	15.7
21 years plus	14.8	12.0
Never married, No inf.	17.8	22.0
Where brought up (Sig.)	100.0	100.0
City	10.5	11.8
Small town	14.6	22.7
Farm	74.9	65.5
With whom lived as child (NS)	100.0	100.0
Both parents	59.3	66.1
Mother only	23.9	19.1
Grandmother	10.4	9.6
Other relative, other	6.3	5.2
Time lived in cities (NS)	100.0	100.0
Less than 2 years	36.8	38.1
2.0–5.9	11.4	9.0
6.0–9.9	7.9	5.2
10.0 or more	27.4	29.1
Born in city	16.5	18.7
Occupation of husband (NS)	100.0	100.0
White collar	12.4	17.7
Blue collar, nonfarm	30.3	19.7
Blue collar, farm	57.3	62.6

Note: NS = not significant.

Fertility Status, Family Planning Attitudes, and Sex Behavior in Relation to Adoption and Nonadoption of Family Planning

Table 7 presents information concerning a second group of variables.

(a) *Fertility status.* More than 92 percent of the women in each group reported that they believed themselves to be fertile, and only about 5 percent believed they were sterile. The remainder did not know. There was no significant difference between the two groups.

(b) *Age at onset of sterility.* A series of questions was asked the small group of women who reported themselves to be sterile in order to learn the basis for their judgment. Most had been rendered surgically sterile, at the recommendation of a physician, for reasons of health. The sterility of the nonclinical group had taken place primarily before age 35, whereas the sterility of the clinic sample had taken place primarily after age 35. This is as would have been expected, because the members of this group had attended a family planning clinic within the past 2½ years.

(c) *Attitude of the woman toward family planning.* The first strong clue concerning the reasons for nonadoption now appear. Women who are in the clinic sample are overwhelmingly strong in their approval of family planning, whereas there is much less warm approval among the nonclinic group. Although more than one-half say they "approve strongly," a very substantial minority say they only "approve moderately." Nevertheless, these data reveal a fact of tremendous importance: *active resistance or disapproval among the nonadopters is very small; only 16 percent of the women said they were not favorably disposed toward family planning.*

(d) *Attitude of the men toward family planning.* The males in households where the woman has attended a clinic are also overwhelmingly strong in their approval of family planning; only 12 percent are either neutral or disapproving. In contrast, the proportion of males in the nonclinic sample who approve of family planning is much smaller. *Yet here also, active resistance to family planning* (as reported by their wives) *is almost nonexistent.* A very large percentage (one-fourth) of the men in this group were reported as being "neutral," but only about 8 percent were said to disapprove. This neutrality or covert resistance by the males could be a major explanatory factor; 33 percent of the males are either neutral or disapproving in the nonclinic sample, whereas only 13 percent of the males in the clinic sample fall in this classification.

(e) *Current sexual activity.* It might be hypothesized that one reason the women in the nonclinic sample had not been to the clinic is that they are not sexually active. It has been shown that about one-eighth of them are never married (single) and an additional one-eighth are separated, widowed, or divorced. Thus, one might expect as many as 35 percent of the women to be sexually

TABLE 7.—*Fertility status, family planning attitudes, and sex behavior of adopters and nonadopters of family planning; Alabama old plantation belt, 1966*

[Data in percent]

Characteristic	Clinic sample	Nonclinic sample
Fertility status	100.0	100.0
Fertile	92.2	90.5
Uncertain, maybe sterile	2.7	4.9
Sterile	5.1	4.6
Age at sterility	100.0	100.0
Before 35 years	41.7	89.5
35–39 years	33.3	5.3
40 or more	25.0	5.3
Attitude of woman toward family planning	100.0	100.0
Approves strongly	86.8	56.6
Approves moderately	8.1	27.0
Neutral	1.6	8.0
Disapproves moderately	1.2	4.3
Disapproves strongly	2.2	4.0
Attitude of male toward family planning	100.0	100.0
Approves strongly	76.5	49.1
Approves moderately	10.4	18.2
Neutral	5.1	24.8
Disapproves moderately	2.2	2.8
Disapproves strongly	5.8	5.0
Ever had sex?	100.0	100.0
Sexually active now	92.8	86.2
Formerly had sex, not now	5.4	9.0
Never had sex	1.7	4.8
Age started having sex	100.0	100.0
Under 15 years	14.3	10.9
15 years	17.0	13.2
16 years	16.0	21.1
17 years	19.0	16.6
18 years	13.2	20.0
19 years or older	20.1	18.1
Frequency of sex relations	100.0	100.0
1–3 times per month	17.0	17.3
4–7 times per month	49.2	41.3
8–11 times per month	23.8	23.7
12 or more times per month	9.9	17.7
Enjoyment of sex relations	100.0	100.0
Enjoy very much	26.4	30.2
Enjoy mildly	51.5	43.5
Do not enjoy	22.1	26.3
Attitude toward sex frequency	100.0	100.0
Too often	8.3	5.8
About right	85.1	82.5
Not often enough	6.7	11.7
Sex partner	100.0	100.0
Husband—married	67.8	69.6
Boy friend—one man	23.4	18.8
Boy friend—different ones	6.2	7.5
Not sexually active, NA	2.5	4.1
Duration of sex partnership	100.0	100.0
Boy friend—less than year	7.3	4.8
Boy friend—1 to 5 years	10.2	11.2
Boy friend—5+ years	6.0	4.1
Married	72.6	75.5
Not sexually active, NA	4.0	4.4

inactive if they were conforming to conventional behavior. Table **8** shows that their behavior was not conventional; **93** percent of the clinic sample and **86** percent of the nonclinic sample were sexually active at the time of the interview. In low income Negro populations, one must clearly assume that all females over age **18** are sexually active, irrespective of marital status.

The hypothesis of nonexposure has some validity, however. Among the nonclinic sample **5** percent claimed never to have had sex relations and an additional **9** percent said they were not sexually active at the present time. These are higher percentages than for the clinic sample.

(f) *Age at which sex activity started.* The median age at which regular sex relations began was **16** for both samples, and the difference was not significant. By age **18**, **80** percent of both groups were sexually active. There was a slight tendency for those who began sex relations earliest to be in the clinic group, but the difference was too small to be highly statistically significant.

(g) *Frequency of sex relations.* It might be hypothesized that couples who have sex relations infrequently might be less inclined to use family planning. The exact reverse seems to be the case; the frequency of sex relations among the nonclinic sample is somewhat higher than among the clinic sample.

(h) *Enjoyment of sex.* The women in the sample who said they "enjoyed sex very much" were more prevalent in the nonclinic group than in the clinic group. But women who said they did not enjoy sex were also somewhat more prevalent in the nonclinic group. Thus, the enjoyment of sex does not have any consistent relationship with family planning adoption, unless one hypothesizes that extreme dislike or extreme liking for sex predisposes one to resist family planning.

(i) *Attitude toward sex frequency.* All but a small minority of women in both samples said that sex relations occurred with just about the frequency they approved. However, women who said that sex did not occur often enough were more common among the nonclinic sample than among the clinic sample, and the women who said sex occurred too often were more concentrated in the clinic sample category.

(j) *Sex partner.* The women who were not living with their husbands were asked to identify their sex partner. Those who were having relations with a boyfriend were tending to live with one man only; only 6 percent of the clinic sample and 7.5 percent of the nonclinic sample said they were having sex with more than one man. *This helps to dispel a persistent notion that family planning promotes immorality.* Almost all of the unmarried persons in this sample were being "immoral" in the sense of being sexually active outside of marriage. But *of those who had been to the clinic there was no more tendency to be promiscuous* (sleep with several men) *than among those who not been to the clinic.*

Summary of fertility, family planning, and sex behavior factors

Among the 11 variables considered in this section, it is possible to extract three hypotheses of why there may be resistance to family planning:

(a) People who have been sterilized or *believe* they are sterile because they have not conceived for a long time may tend to dispense with contraception when they have sex relations. This is a minor factor, however.

(b) Persons who are not sexually active, either because they are single and not having sex relations or because they are widowed, separated, or divorced and not having sex, are not candidates for family planning. Among the sample studied here, this is a small fraction.

(c) Only people who approve of family planning (have a favorable attitude) will practice it. A neutral or an unfavorable attitude on the part of the woman or the man (or both) will tend to be accompanied by nonadoption. An ambiguous situation is created where one partner approves and the other does not. Luckily, there is very little active resistance to family planning, only a neutral or disinterested attitude among the nonadopters.

(d) Couples that are highly sexed (take unusually great pleasure in sex relations and engage in sex with above-average frequency) may tend to be impatient with contraception and hence fail to use it. Also, couples that get only a mild enjoyment out of sex or even where one partner does not enjoy it may find it possible to plan for contraception more effectively.

There is no significant relationship between acceptance of family planning and the age at which sex relations began, sexual activity outside marriage, or promiscuity.

Knowledge and Use of Family Planning Methods in Relation to Adoption of Family Planning

One of the strongest and most consistent relationships to emerge from this study is the finding that users of family planning have a much higher level of knowledge about family planning than nonusers. At first this might seem to be a simple truism worthy of little additional attention. But the relationship is more than this. To practice family planning, knowledge of only one method is required. The women who had attended the clinic had a much higher level of knowledge about a variety of methods than did the women who had not attended the clinic. Moreover, the women who had attended the clinic knew more about the more modern and more reliable methods.

Table 8 shows the percentage of women in the clinic and nonclinic samples who had ever heard of each of the principal methods of birth control. For every method, a higher percentage of the women in the clinic sample had knowledge, and by a substantial margin. Thus, the clinic women were in a much better position to compare methods, to choose, and to be prepared to change if they found one method not to their liking. Yet knowledge is not the whole explanation for nonadoption. Among the nonclinic sample, more than three-fourths knew of the birth control pill, and more than 40 percent knew of each of the reliable methods. More than 80 percent knew of one reliable nonclinic method—the condom.

TABLE 8.—*Knowledge of family planning methods by clinic and nonclinic women; Alabama old plantation belt, 1966*

[Data in percent]

Method	Clinic	Nonclinic
	Percent	*Percent*
Birth control pill	88.8	75.6
Injections	20.4	13.3
Intrauterine devices	37.8	19.4
Diaphragm and jelly	64.9	40.8
Condom	87.6	81.3
Aerosol foam	69.2	44.2
Jelly and cream	62.1	40.9
Suppositories, tampon	55.0	37.5
Rhythm	46.4	39.1
Douche	83.9	65.6
Withdrawal	68.9	51.4

It is not enough, however, simply to know that a method exists. There is need to know its degree of reliability. Each respondent was asked to estimate the reliability of each method of which she had ever heard. For each estimate, there were three possible ratings:

(a) Correct estimate of reliability, (b) overestimate of reliability, and (c) underestimate of reliability.

Because one could not hold these informants to a precise knowledge of the level of reliability, a rather generous allowance was made, to gain an appreciation of whether they knew the general magnitude of reliability. The results of this inquiry are reported in table 9. The clinic sample had more correct knowledge of the reliability of the "clinic" methods of contraception than did the nonclinic sample. In general, for the other methods, which could be purchased at a pharmacy, they had less reliable knowledge than did the nonclinic sample. There are two exceptions to this. Women in the clinic sample were more aware (a) that the douche is an unreliable method of family planning, and (b) that in general condoms are a reliable method. in fact, a substantial percentage tended to overestimate the reliability of the condom by saying it was "100 percent effective." This is less of an error than the very large percentage of nonclinic women who reported they believed it was only 50 percent effective or less. Both of these items of information are commonly imparted at the clinics; women are warned against trusting the douche for family planning, and the condom is regularly mentioned as a reliable method in reviewing the various methods of birth control.

Women in the clinic sample were much more inclined than the nonclinic women to overestimate the reliability of aerosol foam, jellies and creams, and suppositories. This is undoubtedly due, in part, to the fact that these are methods either approved by the clinic (aerosol foam and jelly are given away free, and hence are "sponsored" by the clinic) or else not criticized. (Most clinics believe that suppositories provide enough protection so that they should not be attacked outright, as is the douche.)

A most important aspect of table 9 is that the women in the nonclinic sample were, in general, well informed of the high risk of pregnancy they were running by not using one of the clinic-sponsored methods. In fact, they tended to seriously underestimate the reliability of modern methods of birth control. One of the sources of resistance or nonadoption seems to be skepticism of the efficacy of the methods offered at the clinic. Moreover, the nonadopters tended to overestimate by a wide margin the efficacy of the douche. Also, they underestimate seriously the effectiveness of condoms, which is the method most widely used and easily available to those who do not attend clinics. This is of fundamental importance for improving the program and assisting resisters to change their behavior.

Use of contraceptives

After inventorying the familiarity of the women with contraceptives and their knowledge of their knowledge of their effectiveness, each woman was asked whether or not she had ever used any of the methods with which she was familiar. The responses are reported in table 10. The sample of clinic women had made more use of every method of contraception than had the nonclinic women. This includes the unreliable methods not prescribed at the clinic as well as the clinic methods. The nonclinic women, by and large, had made extensive use of only two methods: condom and douche. However, a small fraction had made use of each of the other methods, including the reliable ones. Presumably they had obtained assistance from private physicians or other sources.

Information about recent and current use of contraceptives was obtained in two ways: (a) an inquiry about use at any time during the year preceding the interview and (b) use at the time of the interview. Both sets of data resulting from these inquiries are reported in table 10. Because two or more methods could have been used during the past year, the total of the clinic sample adds to more than 100 percent. However, the total for the nonclinic samples adds to 52 percent; therefore, a maximum of only one-half of the nonclinic sample had used contraception during the year preceding the interview, while it must be presumed that nearly 100 percent of the clinic sample had used contraception. The clinic sample had made extensive use of methods approved and dispensed by the clinic: pills, foam, IUCD, jelly, and cream. The nonclinic sample had used primarily condoms and douche, although a small fraction said they had used the pill. It must be pointed out, however, that during

TABLE 9.—*Knowledge of the reliability of family planning methods by clinic and nonclinic women; Alabama old plantation belt, 1966*

[Data in percent]

Method	Correct		Overestimate		Underestimate	
	Clinic	Nonclinic	Clinic	Nonclinic	Clinic	Nonclinic
Birth control pill	79.4	65.5	....	....	20.6	34.5
Injections	19.6	5.2	....	....	80.4	94.8
Intrauterine devices	41.3	21.0	....	...	58.7	79.0
Diaphragm and jelly	21.2	5.3	....	....	78.8	94.7
Condom	17.7	10.1	27.7	19.4	54.6	70.5
Aerosol foam	15.0	34.3	41.1	12.0	43.9	53.7
Jelly and cream	22.5	24.6	14.5	4.5	62.9	70.9
Suppositories, tampon	39.8	53.8	27.6	18.2	32.5	28.0
Rhythm	57.3	55.1	42.7	44.9	....	....
Douche	53.1	38.5	46.9	61.5	....	....
Withdrawal	65.0	76.7	35.0	23.3	....	....

TABLE 10.—*Use of contraceptives: Ever, during past year, and at time of interview by clinic and nonclinic women, old plantation belt of Alabama, 1966*

[Data in percent]

Method	Has ever used		Used past year		Using at interview date	
	Clinic	Nonclinic	Clinic	Nonclinic	Clinic	Nonclinic
Uses no method	....	....	....	....	20.1	57.3
Birth control pill	58.2	8.5	47.8	6.2	37.9	5.5
Injections	0.4	0.3	0.0	0.0	0.0	0.0
Intrauterine devices	5.2	0.3	5.0	0.0	4.9	0.0
Diaphragm and jelly	11.5	4.8	2.1	0.3	0.8	0.3
Condom	52.5	33.4	21.1	16.1	9.2	15.3
Aerosol foam	29.9	6.7	18.0	3.2	8.8	2.6
Jelly and cream	16.5	6.3	6.1	0.6	2.0	0.9
Suppositories, tampon	20.5	7.9	7.4	2.4	2.7	1.7
Rhythm	7.7	4.2	3.1	0.9	0.4	0.3
Douche	46.6	35.2	23.0	16.7	3.3	6.3
Withdrawal	30.7	10.8	11.4	5.4	3.3	1.5
Not exposed	....	....	....	....	6.6	8.4

the past year the clinic sample had made use of some highly unreliable methods—douche, withdrawal. This could have been before going to the clinic for prescription of one of the more reliable methods.

When asked about their current practice at the time of the interview, 80 percent of the clinic patients, but only 43 percent of the nonclinic patients, claimed to be practicing some form of contraception. Moreover, the practice of the clinic sample was much more concentrated among the more reliable methods than was the practice of the nonclinic sample. This is convincing proof that a program to provide modern family planning to rural poverty populations can have a lasting impact. Once they have attended a clinic, a very high percentage appear to persist in using some form of contraception, even though they may abandon the method prescribed. Moreover, the form of contraception they practice tends to be more reliable than the forms used by those who do not go to the clinic. Specifically, they tend to avoid relying on the douche and to make much more extensive use of pills, the IUCD, aerosol foam, and jellies and creams. If they do abandon the clinic methods they tend to fall back on the condom. It must be pointed out, however, that not less than 7 percent of those who had been to the clinic at least one time had returned to a method that would not be approved by their advisors: withdrawal, douche, rhythm. Adding this to those who were using no method, yields a total of 27 percent "relapse" rate, and a total of 73 percent "success" rate for the clinic sample. The corresponding "success" rate for the nonclinic sample is almost the reverse: 35 percent, with a "failure" rate of 65. This result is doubly encouraging: The success rate is higher than many persons would have expected in such a population, and the percentage of persons who are "doing something" about controlling fertility, and doing something that would be approved by the family planning clinics, is surprisingly high—one-fourth, excluding those not exposed.

Taking chances

The women who were using a method at the current time were asked about the regularity of their use. Irregular use was called "taking a chance." The women admitted taking chances as follows: Clinic sample, 19 percent; nonclinic sample, 27 percent.

Thus, irregularity of use was significantly higher among the nonclinic sample than among the clinic sample. It must be pointed out, however, that one woman in five of the clinic sample who was currently using contraception admitted irregular use. Again, this is both encouraging and discouraging. It is encouraging to know that 80 percent of those who are persisting are using the method correctly and regularly, and that they take chances only two-thirds as often as the small fraction of nonclinic women who are practicing contraception. It is discouraging that the performance is not perfect. When asked why they took chances, the reasons given were as follows:

Reason	*Clinic Percent*	*Nonclinic Percent*
Ran out of supplies	5.9	2.3
Thought it was safe period	2.0	0.0
Too excited	0.0	0.7
Too lazy	3.7	2.3
To increase sex pleasure	3.7	8.1
Other	2.2	2.0
No information	1.5	8.9

The above reasons refer to the respondents' recollection of the reasons for the last episode of chance-taking. It might be noted that nearly one-half of the chances taken by the clinic sample were due to causes more excusable—running out of supplies or not using contraception during the safe period—while the proportion of excusable reasons for the nonclinic sample is much smaller.

Reasons for not using birth control at present

The women who were not using birth control at the time of the interview were asked the reasons why. The explanations given were as follows:

Reasons	*Clinic* *Percent*	*Nonclinic* *Percent*
Wish to get pregnant	20.4	12.4
Believe to be sterile	42.6	40.7
Religious beliefs	5.6	15.2
Spouse objects	9.3	6.9
Believe contraception injures health	12.0	15.2
Failure of method being used	5.6	4.1
Carelessness	0.0	4.8
No information	4.6	0.7

The largest single explanation for failure to practice contraception seems to be the belief (probably mistaken) that the woman can no longer get pregnant. Excluding those who wish to get pregnant, the second most prevalent reason is the misbelief that using contraception impairs health. There is still fear of the effects of pills and the IUCD; when accompanied by the belief that the other methods are unreliable, it creates a situation where the person's will to practice family planning may be neutralized. Religious beliefs and objections of the husband are the next important reasons. Discouragement with family planning as a result of failure is also a significant reason. None of the clinic sample and only 5 percent of the nonclinic sample showed unconcern about the problem as a reason for not practicing family planning.

Thus, to improve, the program must be stepped up to—

(a) Explain that contraception does not affect health.

(b) Explain that many older women are still fertile, even though they think they may not be.

(c) Explain that religious leaders of all faiths approve of family planning—especially the Protestant faiths.

(d) Contact the husbands, to neutralize their objections to family planning.

(e) Encourage people who have failed with one method to try another one that is more reliable.

Instead of finding a hard core of resistance to family planning, at the heart of nonadoption we find misunderstanding, ignorance of methods, ignorance of reliability, and other attitudes that should not be difficult to change by an appropriate program. Moreover, we find that no less than one-fifth of the persons who had been to the clinic and then stopped practicing have done so because they wish to have another child. The 27-percent failure, enumerated above, thus is reduced to a maximum of about 22 percent.

Impact of the Mass Communication Program

As described above, booklets on family planning were given to the clients, and mailed to them. Some of the booklets were mailed from Chicago to lists provided by the Planned Parenthood League of Alabama. Women were asked to show these books to their neighbors. Apparently, the family planning workers had abandoned the use of the booklets after a comparatively short time, for only 28 percent of the clinic sample had ever seen the booklets. This was only a small percentage greater than the 19 percent of nonclinic women who had seen the booklets. On those who had seen the booklets more than one-half claimed to have read at least a part, and about 30 percent claimed to have read one-half or more. The shorter booklets were read all the way through in a higher percentage of cases than the big 56-page booklet. A typical example is the 10-page booklet that was especially prepared for low-education couples:

Action	*Clinic* *Percent*	*Nonclinic* *Percent*
Had never seen booklet	71.8	80.9
Had seen, but not read	11.8	10.6
Had read about one-fourth or less	4.3	0.5
Had read about one-half	3.1	0.5
Had read all or nearly all	9.0	7.5

When the booklets were available, the clinic sample had read them with greater frequency, and more had nearly read them all the way through, than had the nonclinic sample. This undoubtedly reflects their greater motivation, because there would be more reason for one of the nonclinic women to read a booklet if she had never been to a clinic to get first-hand instruction.

These results indicate that if clinic workers will distribute written materials those who accept them will read at least a part of them, but they also indicate that clinic workers have a low estimate of the willingness of the low-education clients to read. Perhaps one of the biggest barriers to the use of family-planning mass communication is overcoming the prejudices of the clinic workers, not improving the reading habits of the clients.

Private Conversations and Acceptance of Family Planning

Communication experts are insistent upon the principle that private conversations between relatives, friends, neighbors—and especially spouses—are essential for the rapid dissemination of family planning information and for massive acceptance of the idea. The followup interviews therefore contained a battery of questions designed to inventory the amount of private conversation that had taken place.

When asked whether they had ever talked with relatives, friends, or neighbors about family planning, three-fourths of the respondents replied in the affirmative, and the percentages were not significantly different for the clinic and the nonclinic group: Clinic group, 74.2 percent had talked; nonclinic group, 76.9 percent had talked. When asked how many times they had held such conversations during the past year, the following impressive results were obtained:

Number of times talked	*Clinic* *Percent*	*Nonclinic* *Percent*
1–2 times	17.2	21.5
3–5 times	31.8	31.0
6–9 times	10.8	12.1
10 times or more	13.2	10.1
Never talked in past year	27.1	25.3

There was no significant difference between the clinic and nonclinic group. Clearly, the women who had never been to a family planning clinic had not lacked for group discussion of the fertility problem. These two sets of statistics suggest that there is much private communication about family planning among the rural poor, at least in areas where a major action program is underway.

It was anticipated that possibly the outcome of these group discussions might affect the attitude and behavior of the women. If the group decision was one of disapproval, it might cause the woman not to attend a clinic, whereas if the outcome was favorable, it might stimulate adoption. Accordingly, the women were asked whether the group reaction to the family planning discussions was favorable or unfavorable to the practice of family planning. A highly significant difference was found: the women who had attended the clinic reported that in their group discussions, family planning was approved, whereas the women who had not attended the clinic tended to report that the group verdict was one of neutrality or outright disapproval in a higher percentage of cases:

Reaction of group	*Clinic* *Percent*	*Nonclinic* *Percent*
Approval of family planning	89.1	79.9
Neutral	5.7	10.6
Disapprove of family planning	5.1	9.5

Despite this highly significant difference, the vast majority of both the clinic and the nonclinic women report that the outcome of these group discussions was favorable. Very evidently, the "attitude climate" for family planning throughout the rural poverty areas of this study was one of approval, and only comparatively rarely did a group arrive at an unfavorable conclusion. But equally clearly, the unfavorable outcome was much more common among those who had never attended a clinic.

Conversations Between Spouses and Clinic Attendance

Even more important than talk with neighbors and friends about family planning is the communication between spouses about the problem of controlling fertility. When asked if they had talked with their sex partner (husband or boyfriend) about contraception, the following highly significant difference was discovered: Clinic sample, 77 percent had talked with sex partner; nonclinic sample, 52 percent had talked with sex partner.

In each case, a majority had discussed the problem, but the proportion was much higher among those who had attended the clinic.

To explore this phenomenon further, the women were asked how freely this conversation took place. The results were as follows:

Freedom of communication	*Clinic* *Percent*	*Nonclinic* *Percent*
Both members discuss it freely	64.0	39.6
Woman wishes to discuss, man does not	9.0	5.1
Man wishes to discuss, woman does not	0.5	0.7
Neither wishes to talk about it	8.4	15.6
Talk has never taken place	18.0	38.9

The very close relationship between interspouse communication and attendance at family planning clinics is unmistakable.

The women were next asked how recently they had talked with their spouse about family planning. It was found that among the clinic sample, the talk had been much more recent than among the nonclinic sample:

Last time talked	*Clinic* *Percent*	*Nonclinic* *Percent*
1–3 weeks	41.3	21.8
1–3 months	16.3	16.1
4–11 months	6.9	4.4
1 year or more	11.0	11.7
Never or no information	24.5	46.0

Nevertheless, nearly one-half of those who had never attended a clinic had talked about the problem of fertility limitation in the past year. The fact that this talk had not produced action probably indicated that an accord either was not reached or that the accord was to do nothing.

Explanations for Attendance or Nonattendance at Clinics

There are a wide variety of explanations of why some persons attend a family planning clinic and others do not. In order to test some of these hypotheses, data were collected on the variables that have been hypothesized. Following is a summary of the data and findings with respect to these hypotheses.

(1) *Religious membership.* Only 7 of the entire sample were members of the Roman Catholic faith, and of these 5 had attended the clinic to obtain family planning help. Among the Protestants, the tendency to practice family planning was slightly higher among Methodists than among Baptists.

(2) *Religious participation.* The practice of family planning was significantly higher among the more actively religious persons than among the inactive.

Frequency of church attendance	*Clinic* *Percent*	*Nonclinic* *Percent*
Weekly or oftener	18.2	13.1
Biweekly	51.1	52.2
Monthly	26.5	25.2
Occasionally	3.5	7.0
Never	0.6	2.5

(3) *Fatalism—Cosmic and Institutional.* It has often been claimed that rural folk are unprepared to control their fertility because they are fatalistic in their outlook: they have no appreciation of their capacity to control their own destiny, but feel that it is controlled for them. Such feelings have two bases:

(1) *Cosmic fatalism*—the belief that "fate" or "God" predetermines events, and that the individual human being merely follows a predetermined course, unable to change it.

(2) *Institutional fatalism*—the belief that because of one's race, caste, economic position, or other situation determined by social or institutional arrangements, one is powerless to affect the outcome of one's life.

It is especially important to make this distinction in rural Alabama, because of the long-standing cultural distinctions of race. The interviews attempted to explore both of these dimensions.

Cosmic fatalism was probed by the following question, "Some people believe that God or fate or luck determines how many children a couple is going to have, and nobody can do anything to change this. Do you think people can influence the number of children they will have or is it all up to God or fate?" That there is clearly a cosmic fatalism acting, either as cause or as justification of one's failure to take action, is evident from the following result:

Response	*Clinic* *Percent*	*Nonclinic* *Percent*
Fate determines	24.0	45.4
People determine	75.9	54.6

Those who had not been to the clinic were much more fatalistic in their outlook than those who had attended the clinic. It must be pointed out, however, that cosmic fatalism does not completely paralyze action in behalf of family planning, for nearly one-fourth of those who had attended the clinic voiced the philosophy of cosmic fatalism. It would appear that in a substantial number of cases cosmic fatalism is only a statement of religious fundamentalism that "God oversees everything," which is not relied upon in all spheres of action. That this is the plausible explanation is evident from the responses to the more general question, "Do you think it does any good to make plans for the future? Some people try to plan ahead for their future. Other people say this does not do any good, that you can't control the future. What do you think?"

Response	*Clinic* *Percent*	*Nonclinic* *Percent*
Planning for future helps	94.0	82.2
Planning does no good	6.0	17.8

The same pattern noted above is again present; the nonclinic sample is much more inclined to say that planning does no good, but the level of implied cosmic fatalism is less than one-half that indicated above. A substantial share of those who claimed that planning for the future does not help were nevertheless practicing family planning. Clearly, cosmic fatalism is an important factor in accounting for why some persons have not visited the clinic, but it is not an unalterable force that prohibits action. In fact, when the subject was explored in another dimension, cosmic fatalism was almost equal among the two groups. The respondents were asked, "Which of the following do you think is the most important thing in determining what happens to you in life:

Response	*Clinic* *Percent*	*Nonclinic* *Percent*
Hard work	80.0	75.0
Having influential friends or "pull"	5.9	8.8
Just plain luck or fate	14.1	16.2

Institutional fatalism was measured by trying to assess the extent to which the respondents felt powerless when confronting the social system. This sense of powerlessness to "beat the system" has been noted as one of the reasons for a sense of hopelessness among the poor. A battery of questions was asked to assess this feeling. The questions, and the percentage of persons expressing institutional powerlessness in response to them, was as follows:

Question	*Clinic* *Percent*	*Nonclinic* *Percent*
Living conditions in this community are not improving for me and I don't think they ever will improve in my lifetime	37.5	43.3
It is better just to accept things the way they are and not try to change them	24.7	39.8
The next generation of my family will not be any better off than I have been	21.2	35.4
My neighbors are so poor and have been poor for so long that they have stopped trying to improve themselves	32.6	46.4
This has happened to me too—I have stopped hoping, and just accept whatever fate brings	19.6	37.3
Average	27.1	40.4

Institutional fatalism or powerlessness is also conducive to failure to attend a family planning clinic; those who feel most hopeless are least inclined to go. This type of fatalism appears to be more prevalent than cosmic fatalism. Yet the same comment applies here; although institutional fatalism is conducive to failure to practice family planning, it is not a fixed barrier; a high percentage of those who have these feelings nevertheless attend a family planning clinic. However, it would appear that if current programs to alleviate poverty are successful in generating a sense of hope for the future, there should be an indirect benefit in the form of increased family planning.

(4) *Marital happiness.* The relationship between marital happiness and family planning has been often discussed, but little factual information has been available. A crude effort was made to measure marital happiness by asking three questions. Each question revealed the same pattern: Family planning is concentrated among those who are happiest and among those who are least happy. On the one

hand, it seems to be practiced by couples who have a high degree of accord and happiness, and on the other hand by couples whose marriage is in trouble and they wish to avoid complicating it by bearing additional children. The following data illustrate the findings:

Question	*Clinic Percent*	*Nonclinic Percent*
How happy is your marriage? Would you say it is:		
Very happy	38.9	27.5
Fairly happy	44.1	60.2
A little unhappy	8.9	6.8
Very unhappy	8.1	5.6
How often do you and your husband have quarrels or disputes over children, money, in-laws, or other matters?		
Very often	10.8	8.6
Once in a while	49.9	57.2
Almost never	39.4	34.2
Sometimes do you seriously wish you had married someone else or never got married at all?		
Feel this way very often	19.2	12.8
Once in a while	50.3	63.6
Almost never	30.5	23.6

There is little that a family planning program can do to affect marital happiness directly. However, it is comforting to the family planners to know that one of the primary characteristics of Negro family life in the rural poverty areas—high incidence of marital tension and unhappiness—works in their favor rather than against them, and that as Negro family life succeeds in becoming completely adjusted this also promotes family planning.

(5) *Contact with the mass media.* Respondents who have the most contact with the outside world via the mass media are more inclined to practice family planning than those who have little or no contact. Yet the relationship is a very loose one. A very high percentage of the women with little mass media contact have been to the family planning clinic, and a substantial number of those who have not been to the clinic have much mass media contact. Thus, use of the mass media seems to facilitate adoption of family planning, but absence of such contact does not forbid or act as a barrier to adoption. The following data illustrate these findings:

Question	*Clinic Percent*	*Nonclinic Percent*
Do you read the newspapers?		
Yes	62.0	66.1
No	38.0	33.9
Do you listen to radio or television?		
Both radio and television	73.4	71.6
Television, but not radio	7.3	4.4
Radio, but not television	18.6	19.4
Neither radio nor television	0.7	2.4
How many times per week do you listen to a newscast all the way through, except possibly for the sports?		
Daily	75.1	61.0
Weekly	7.2	16.4
Occasionally	11.9	12.9
Almost never or never	5.8	9.7
Do you read magazines?		
Yes	51.0	40.1
No	49.0	59.9
Do you read books?		
Yes	40.9	22.9
No	59.1	77.1

These data suggest that newspaper reading and radio-television listening have little relationship to adoption as such. A high percentage of persons do one or both. It is serious listening or specialized reading (magazines and books) that distinguish the adopters from the nonadopters. Yet although these relationships are highly significant statistically, one-half or more of the women who attended the clinics say they do not read books or magazines, and a very substantial share do not listen to newscasts. Conversely, of those who have not gone to the clinic, more than 60 percent listen to the newscasts daily, 40 percent read magazines, and more than 20 percent read books.

These statistics have one very clear implication: A very significantly large proportion of these people can be reached by the mass media. Two-thirds read newspapers; more than 70 percent listen to both television and radio, and less than 3 percent listen to neither; nearly one-half read magazines and nearly one-third read books. It is quite probable that much more use could and should be made of the mass media in trying to reach those who have not attended the clinics.

Knowledge and liking for the clinics. One possible explanation of why some persons have not attended the clinic is lack of information that the service is available. This hypothesis was explored by asking the following questions:

Question	*Clinic Percent*	*Nonclinic Percent*
Do you know whether there is any place in this county where they give out information about family planning and where they give you the things you need to use to keep from getting pregnant?		
Knows of such a place	93.8	74.0
Does not know of such a place	6.2	26.0
IF COUNTY HEALTH CENTER NOT MENTIONED: Did you know that this service is available at the county public health center in (your) county?		
Yes		58.4
No		41.6
IF KNOWS OF HEALTH CENTER: Have you ever thought of going there for family planning help for yourself?		
Yes, have thought of going		41.7
No, have not thought of going		58.3
IF KNOWS BUT HAS NEVER GONE: What are your reasons for not going there to get help with family planning?		
No desire for family planning service		38.2
No need—using other methods (drug store)		14.1
No need—not exposed, sterile, no sex relations		14.1
Health reasons, fear will injure health		1.8
Fear, distrust, dislike of clinic		6.4
Procrastination, neglect		14.1
Distance from the clinic, no way to get there		7.3
Other		4.1

Conclusions from the followup survey. The data reported here merely show crude differences between the clinic and nonclinic samples. Analysis of a more refined nature is underway and will be reported elsewhere. However, even this overview permits us to make several generalizations of a psychological nature about the acceptance or nonacceptance of the clinic program.

(a) Demographic characteristics, including education and income, do not differentiate adopters and nonadopters when a massive public program of family planning service is available.

(b) A strongly positive attitude toward family planning is the best single indicator of adoption. Those who do not adopt are only moderately positive and are strongly negative in only a minority of cases.

(c) Knowledge of reliable family planning methods and a correct knowledge of their reliability is conducive to adoption; lack of knowledge or misinformation about the reliability of modern methods is conducive to nonadoption.

(d) Other than lack of information, the following factors emerged as explanations of why some women did not go to the clinic:

(1) Mistaken belief that they would not get pregnant.

(2) Fear that the methods offered would adversely affect health.

(3) Objections of husband or boyfriend.

(4) Unusually great enjoyment of sex and desire to do nothing to interfere with sex pleasure.

(5) Failure of spouses to talk over the problem of family size and fertility control.

(6) Holding a fatalistic outlook on life, either of a cosmic or an institutional nature.

(7) Failure of a marriage to be completely happy.

(8) Not engaging in serious use of the mass media (not listening to newscasts, not reading books or magazines).

(9) Religious or moral beliefs that condemn the practice of family planning.

(10) Participating in group discussions in which an unfavorable decision about family planning was reached.

(11) Discouragement as a result of getting pregnant accidentally while using contraception.

(12) Carelessness, apathy, laziness.

(13) Lack of information about the existence, location, and availability of family planning services and source of supplies.

(14) Procrastination, postponement of decision.

(15) Fear, distrust, dislike of way clinics are operated.

(16) Lack of sufficient motivation, lack of appreciation for need for family planning.

Further intensive analysis will be required to determine the potency of each of these explanations independently of the others, and how much nonadoption remains unexplained when all are used simultaneously. Fortunately most of the items on the above list can be corrected or remedied by a properly designed and sustained program of public information, persuasion, and high quality service. Therefore, the prospects of improving further upon rural fertility control programs are good.

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ACKNOWLEDGMENTS

The funds expended in performing the Pilot Experiment in Bullock County were provided by the Rockefeller Foundation of New York as part of a grant to the Community and Family Center for "Basic Social Research in Human Fertility."

The funds for performing the Clinic-Plus-Education experiment were provided by the Population Council of New York City as part of a grant to the Community and Family Study Center for "Experiments in Family Planning in Rural Areas."

PART IV

Agriculture and Natural Resources

Chapter 23

Agriculture: Prospective Growth and Structural Change

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The major revolution occurring in agriculture in resource adjustment and associated changes in the number and size of farms is by no means at an end. The purpose of this exercise is to appraise prospective growth in agriculture and likely drives back of this growth, and to explore possible changes in total resource inputs, farm numbers, and the organization of U.S. agriculture.[1]

Domestic markets will continue to grow, perhaps a bit more rapidly than projected growth in population. Further advances in consumer income and changes in relative prices will further modify our diet toward more beef and poultry and more highly processed convenience-type foods. Likely changes will require more resources per person for food, but this may primarily mean increases in nonfarm resources.

The rate of overall demand growth, as in the past, will depend heavily on growth in exports of farm products. How rapidly exports rise will depend on U.S. availabilities and prices, the size and nature of food aid programs, and a host of economic and institutional forces influencing exports. This appraisal assumes that the volume of crop exports would increase about 4½ percent a year to 1972. Projections for 1980 assume three alternatives for annual growth in crop exports: 3 percent, 4½ percent, and 6 percent. These are plausible assumptions rather than independent appraisals of export prospects. They compare with an annual increase in crop export volume of more than 5 percent since 1960. Export assumptions, expected growth in population and income, and a simple analytical framework provide the basis for the general demand-output-price balances projected for agriculture for 1972 and 1980. Projections of resource requirements, number of farms, and the general size structure of agriculture are based largely on past trends and relationships.

Economic Growth and Agriculture

Developments in agriculture depend importantly on increases in population and growth in consumer buying power, the major determinants of demand for farm products. The growth and prosperity of the economy not only provide off-farm employment alternatives for farm people, but largely determine the availability and cost of capital, labor, and other inputs used in agriculture.

Population, which is the major determinant of domestic demand, is expected to grow at about 1.3 percent a year in the next 5 to 10 years. This compares with annual growth of 1½ percent from 1960 to 1965 and 1.8 percent from 1950 to 1960 (table 1).

With a generally younger population, the labor force is projected to grow about 1.8 percent per year in the next several years. Such rapid growth presents an opportunity as well as a challenge to assure enough jobs, schools, and housing. If economic conditions bring forth adequate investment, the output potential of the economy could grow some 4 to 4½ percent per year well into the 1970 decade. Such growth would mean gains in per capita buying power of some 2½ to 3 percent a year.

Demand for and Utilization of Farm Products

Domestic markets for food and farm products in general are expected to grow a little more rapidly than population. Accordingly, projected domestic uses increase by 28 to 33 percent from 1965 to 1980, with the range primarily reflecting variations in projected prices under the assumed export alternatives (table 2). Feed concentrate use under the same assumptions may increase more than 40 percent over the next 15 years (1965 to 1980) (table 3).

Output, Resource Use, and Productivity

Under the projected demand-output balance projected for agriculture, production rises somewhat more rapidly than in the past 15 years (1950–65). With rising productivity, employment in agriculture

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[1] See also Rex Daly, "Agriculture: Projected Demand, Output, and Resource Structure," in *Implications of Changes (Structural and Market) on: Farm Management and Marketing Research*, Center for Agriculture and Economic Adjustment, Iowa State University, Report 29, 1967.

TABLE 1.—*General economic growth and agriculture, selected periods 1940 to 1966 and projections to 1980*

Period	Population	Labor force	Employment		Output per man-hour [1]		Gross national product [1]		Disposable income [1]	
			Total	Farm	Total	Farm	Total	Farm	Total	Per capita
	Mil.	*Mil.*	*Mil.*	*Mil.*	*Dol.*	*Dol.*	*Bil. dol.*	*Bil. dol.*	*Bil. dol.*	*Dol.*
1940	132	56.2	48.1	9.5	2.08	0.72	227	17.5	166.3	1,259
1950	152	64.7	61.8	7.7	2.72	1.03	355	19.4	249.6	1,646
1959–61 average	181	73.1	68.7	5.4	3.51	1.79	487	21.7	341.3	1,891
1964–66 average	195	78.5	75.0	4.4	4.07	2.24	614	22.7	429.6	2,208
Change from 1950 (percent)	28.3	21.3	21.4	−42.9	49.6	117.5	73.0	17.0	72.1	34.1
Annual rate (percent)	1.7	1.3	1.3	−3.6	2.7	5.3	3.7	1.1	3.7	2.0
Projected										
1972										
Export I [2]	213	89	85.7	3.6	4.9	3.35	825	26.1	580	2,725
Change from 1964–66 (percent)	9.2	13.4	14.3	−18.2	20.4	49.5	34.4	15.0	35.0	23.4
Annual rate (percent)	1.3	1.8	1.9	−2.4	2.7	5.9	4.3	2.0	4.4	3.0
1980										
Export I [2]	242	101.5	97.5	2.8	6.10	5.10	1,126	30.0	790	3,250
Change from 1964–66 (percent)	24.1	29.3	30.0	−36.4	49.9	127.7	83.4	32.2	83.9	47.2
Annual rate (percent)	1.5	1.7	1.8	−2.1	2.8	5.6	4.1	1.9	4.1	2.6

[1] In constant 1958 dollars.
[2] Export I—crop export volume rises at 4½ percent per year.

TABLE 2.—*Demand for farm products: Domestic use and exports, selected periods 1949 to 1966 and projections to 1980*

(1957–59 dollars)

Period	Livestock utilization			Crop utilization			Net domestic		Exports
	Feed and seed	Other		Feed and seed	Other				
		Total	Per capita		Total	Per capita	Total	Per capital	
	Bil. Dol.	*Bil. Dol.*	*Dol.*	*Bil. Dol.*	*Bil. Dol.*	*Dol.*	*Bil. Dol.*	*Dol.*	*Bil. Dol.*
1949–51 average	1.2	14.2	93.3	7.6	10.1	66.8	24.3	160.1	2.7
1959–61 average	0.6	18.0	100.0	8.5	10.9	60.4	28.9	160.4	4.3
1964–66 average	0.5	19.8	102.0	8.8	11.7	60.0	31.5	162.0	5.6
Change from 1949–51 (percent)	−58.3	39.4	9.3	15.8	15.8	−10.2	29.6	1.2	107.4
Annual rate (percent)	.....	2.3	0.6	1.0	1.0	−0.7	1.7	0.1	5.0
Projected									
1972:									
Export I [1]	0.5	22.6	106	10.6	12.8	60.0	35.4	166	7.6
Change from 1964–66 (percent)	0	14.1	3.9	20.5	9.4	0	12.4	2.5	35.7
Annual rate (percent)	0	1.9	0.4	2.6	1.3	0	1.7	0.4	4.5
1980									
Export I [1]	0.5	26.4	109	12.9	14.5	60	41.0	169	10.5
Change from 1964–66 (percent)	0	33.3	6.9	46.6	23.9	0	30.2	4.3	87.5
Annual rate (percent)	0	1.9	0.4	2.6	1.5	0	1.8	0.3	4.3
Export II [2]	0.5	26.0	108	12.6	14.3	59	40.3	167	12.5
Change from 1964–66 (percent)	0	31.3	5.9	43.2	22.2	−1.7	27.9	3.1	123.2
Annual rate (percent)	0	1.8	0.3	2.4	1.4	−0.1	1.7	0.2	5.5
Export III [3]	0.5	26.9	111	13.2	14.8	61	41.7	172	8.3
Change from 1964–66 (percent)	0	35.9	8.8	50.0	26.5	1.7	32.4	6.2	48.2
Annual rate (percent)	0	2.0	0.5	2.8	1.6	0.1	1.9	0.4	2.7

[1] Export I—Crop export volume rises at 4½ percent per year.
[2] Export II—Crop export volume rises at 6 percent per year.
[3] Export III—Crop export volume rises at 3 percent per year.

TABLE 3.—*Total farm output, utilization, prices, and income, averages 1949–51 and 1964–66 and projections to 1980*

Item	1949–51 average	1964–66 average	Projected [1]			
			1972	1980		
			Export I	Export I	Export II	Export III
Supplies:						
Farm output (bil. 1957–59 dol.)	23.8	32.5	38.6	46.3	47.7	44.9
Farm output (1957–59=100)	84	113	135.7	163.0	168.0	158.1
Livestock (1957–59=100)	86	113	129.1	150.6	148.3	153.1
Crops (1957–59=100)	90	113	139.6	172.3	179.8	163.5
Imports (bil. 1957–59 dol.)	3.3	4.0	4.5	5.1	5.1	5.1
Utilization:						
Domestic, excluding feed and seed (bil. 1957–59 dol.)	24.4	31.5	35.4	41.0	40.3	41.7
Per capita (1957–59 dol.)	160.8	162	166.0	169	167	172
Livestock (1957–59 dol.)	93.6	102	106.0	109	108	111
Crops (1957–59 dol.)	67.2	60	60.0	60	59	61
Feed and seed (bil. 1957–59 dol.)	8.8	9.3	11.1	13.4	13.1	13.7
Exports (bil. 1957–59 dol.)	2.7	5.6	7.6	10.5	12.5	8.3
Total net use[2] (bil. 1957–59 dol.)	27.1	37.1	43.1	51.4	52.8	50.0
Inventory change (bil. 1957–59 dol.)	0	−0.6	0	0	0	0
Livestock production units (mil.)	175.4	212	236	279	275	284
Concentrates fed (mil. tons)	122.9	157	182	228	223	235
Feed use per unit (tons)	.70	.74	.77	.82	.81	.83
Prices received (1910–14=100)	270	250	260	276	307	252
Livestock	296	263	281	297	319	276
Crops	241	235	236	252	297	226
Cash receipts (bil. dol.)	29.7	39.7	48.5	61.7	69.4	55.1
Livestock	17.0	22.1	26.9	33.3	35.2	31.5
Crops	12.7	17.6	21.6	28.4	34.2	23.6

[1] Export I assumes crop exports increase at 4½ percent per year; Export II assumes crop exports increase at 6 percent per year, and Export III assumes crop exports increase at 3 percent per year.

[2] Feed and seed cancel out to avoid double counting in the total.

continues to decline about 2½ percent a year (table 4). Farm employment (SRS concept) [2] would decline to 3 to 3½ million workers by 1980 from an average of 5.7 million in 1964–66. This implies that farm output per man-hour in agriculture would continue upward by nearly 6 percent per year.

Declines in farm employment reflect the downtrend in number of farms as well as output and productivity trends. Much of the rise in labor productivity for agriculture as a whole—possibly as much as 60 to 70 percent—is due to the movement of farms with lower productivity into the more efficient size groups or out of agriculture. Labor requirements and projected farm numbers, assuming no major changes in definition, imply a farm population by 1980 around 7½ million. This compares with 12.3 million in 1965. The projected decline is slower than that during the past 15 years. Even so, farm population as a percentage of total population would decline from 6½ percent in 1965 to possibly 3 percent by 1980.

Total resource inputs may change little if the uptrend in productivity continues. But some increase is projected for land and capital resources and big increases are likely in the use of such inputs as fertilizer and chemicals, fuels, services, and many other operating inputs.

Number and Size of Farms, Income, and Resource Structure

The possibilities for further adjustment in agriculture point to continued declines in farm numbers and rapid changes in the size structure of farms. Shifts in resource use associated with technological advances, productivity gains, and changes in the relative cost of inputs have resulted in the replacement of labor and to some extent land, with machinery and equipment, fertilizer, and other inputs. These adjustments will bring further declines in the number of farms and extensive shifts in the mix of labor and capital as well as rapid advances in the productivity of labor.

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[2] Statistical Reporting Service, U.S. Department of Agriculture.

TABLE 4.—*Farm output, productivity, and resource use, selected periods, 1949 to 1966 and projections to 1980*

Period	Farm output 1957–59 = 100		Productivity, 1957–59 = 100			Resource inputs			
						1957–59 = 100			
	Crops	Livestock products	Output per acre	Output per man-hour	Output per input	Total inputs	Labor	Cropland[4]	Production assets[5]
								Mil. acres	*Bil. dol.*
1949–51 average	91	88	85	60	86	102	146	382	194
1959–61 average	106	105	108	114	104	101	93	351	212
1964–66 average	113	112	120	152	112	103	75	334	212
Change from 1949–51 (percent)	24.4	28.4	41.2	153.4	30.2	1.0	−48.6	−12.6	9.3
Annual rate (percent)	1.5	1.7	2.3	6.4	1.8	0	−2.7	−0.8	0.6
Projected									
1972									
Export I[1]	139.6	129	135	225	130	104	60	368	220
Change from 1964–66 (percent)	23.5	15.2	12.5	48.0	16.0	1.0	−20.0	10.2	3.8
Annual rate (percent)	3.0	2.1	1.7	5.8	2.1	0.1	−2.6	1.4	0.6
1980									
Export I[1]	172	151	162	360	152	107	45	380	242
Change from 1964–66 (percent)	52.2	34.8	35.0	136.8	35.7	3.9	−40.0	13.8	14.2
Annual rate (percent)	2.8	2.0	2.0	5.9	2.0	0.3	−2.3	0.9	0.9
Export II[2]	180	148	169	360	152	110	47	380	
Change from 1964–66 (percent)	59.3	32.1	40.8	136.8	35.7	6.8	−37.3	13.8	
Annual rate (percent)	3.2	1.9	2.3	5.9	2.0	0.5	−2.1	0.9	
Export III[3]	164	153	162	360	152	104	44	360	
Change from 1964–66 (percent)	45.1	36.6	35.0	136.8	35.7	1.0	−41.3	7.8	
Annual rate (percent)	2.5	2.1	2.0	5.9	2.0	0	−2.4	0.5	

[1] Export I—Crop export volume rises at 4½ percent per year.

[2] Export II—Crop export volume rises at 6 percent per year.

[3] Export III—Crop export volume rises at 3 percent per year.

[4] Cropland used for crops including fallow.

[5] Farm production assets estimated in 1965 dollars.

There were around 3.4 million farms in 1965, some 2¼ million fewer than in 1950. Most of this decline occurred in the smaller size groups; only the largest size groups increased in number. These shifts in the size structure of agriculture are expected to continue, and technological possibilities for such adjustments suggest they could accelerate. A change matrix, showing changes by farm size groups between 1959 and 1964 census years was used as a basis for projecting farm numbers by 5-year intervals to 1980. Chaining forward on the basis of this matrix suggests a leveling in farm numbers around 1½ million units sometime around 1990.

The 1965 base table on income and resources shows estimates based on published 1965 data and incomplete census reports on farm numbers available early in 1966 (table 5). Around 2.7 million farms are projected for 1972 compared with 3.4 million estimated for 1965. Technical possibilities for resource adjustment or a small change in the definition of a farm could result in a much larger decline. Productive asset use is projected to increase about 5 percent by 1972, but labor inputs decline about 20 percent (table 6)

Projections to 1980 indicate about 2 million farms. Around a million of these would fall in size groups with sales above $10,000 per farm. The remainder would fall in the smaller sales groups and in part-time and part-retirement farms (table 7). If all farms were organized like the $40,000- and-over sales groups, projected production for 1980 probably could be provided by around ½ million farms. These would be farms with sales, in 1965

TABLE 5.—*Income and resources of farms by economic class, estimated 1965* [1]

Item	Farms with sales						All farms
	$40,000 and over	$20,000–$39,999	$10,000–$19,999	$5,000–$9,999	$2,500–$4,999	Under $2,500	
1. Number of farms (1,000)	170	300	520	525	450	1,410	3,375
2. Cash receipts plus Govt. payments (mil. dol.)	17,369	9,000	7,800	3,938	1,688	1,844	41,639
Per farm (dol.)	102,171	30,000	15,000	7,500	3,750	1,308	12,337
3. Realized gross farm income (mil. dol.)	17,701	9,468	8,393	4,386	2,018	2,971	44,937
Per farm (dol.)	104,124	31,560	16,140	8,355	4,485	2,107	13,315
4. Production expenses (mil. dol.)	14,034	6,444	5,265	2,524	1,089	1,379	30,735
Per farm (dol.)	82,553	21,480	10,125	4,808	2,419	978	9,107
5. Realized net farm income (mil. dol.)	3,667	3,024	3,128	1,862	930	1,591	14,202
Per farm (dol.)	21,571	10,080	6,015	3,547	2,066	1,128	4,208
6. Total production assets (mil. dol.)	64,272	44,235	41,226	24,046	11,904	24,477	210,162
Per farm (dol.)	378,070	147,450	79,280	45,802	26,453	17,360	62,270
7. Land in farms (mil. acres)	385	209	204	133	77	143	1,151
Per farm (acres)	2,265	697	393	253	171	101	341
Cropland in farms (mil. acres)	89	98	114	76	38	42	458
Per farm (acres)	523	325	220	145	85	30	136
8. Total labor used (mil. hours)	1,565	1,201	1,454	1,163	838	1,755	7,978
Per farm (hours)	9,206	4,004	2,796	2,215	1,863	1,245	2,364
Operator and family (mil. hours)	325	585	1,040	1,050	828	1,680	5,510
Per farm (hours)	1,912	1,950	2,000	2,000	1,841	1,192	1,633
Hired labor (mil. hours)	1,240	616	414	113	10	75	2,468
Per farm (hours)	7,294	2,054	796	215	22	53	731

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[1] Estimates prepared early in 1966 on the basis of incomplete census returns on the number of farms. Incomes and expenditure data also do not reflect recent small changes in estimates for 1965.

TABLE 6.—*Income and resources of farms by economic class, projected to 1972*
[1965 prices]

Item	Farms with sales						All farms
	$40,000 and over	$20,000–$39,999	$10,000–$19,999	$5,000–$9,999	$2,500–$4,999	Under $2,500	
1. Number of farms (1,000)	235	330	440	355	285	1,030	2,675
2. Cash receipts plus Govt. payments (mil. dol.)	25,706	9.900	6,600	2,662	1,069	1,363	47,300
Per farm (dol.)	109,387	30,000	15,000	7,500	3,750	1,323	17,682
3. Realized gross income, total (mil. dol.)	26,143	10,415	7,102	2,966	1,278	2,184	50,088
Per farm (dol.)	111,247	31,560	16,140	8,355	4,485	2,120	18,725
4. Production expenses (mil. dol.)	20,668	7,088	4,455	1,707	689	1,013	35,620
Per farm (dol.)	87,947	21,480	10,125	4,808	2,419	983	13,316
5. Realized net income (mil. dol.)	5,475	3,327	2,647	1,259	589	1,171	14,468
Per farm (dol.)	23,300	10,080	6,015	3,547	2,066	1,137	5,409
6. Total production assets (mil. dol.)	95,112	48,657	34,867	16,248	7,538	17,743	220,165
Per farm (dol.)	404,732	147,446	79,243	45,769	26,448	17,226	82,305
7. Land in farms (mil. acres)	504	230	173	90	49	105	1,151
Per farm (acres)	2,145	697	393	253	171	102	430
Cropland in farms (mil. acres)	147	107	97	51	24	32	458
Per farm (acres)	626	325	220	145	85	31	171
8. Total labor used (mil. hours)	1,936	1,138	1,060	678	459	1,119	6,390
Per farm (hours)	8,238	3,450	2,410	1,910	1,610	1,086	2,389
Operator and family (mil. hours)	450	643	858	646	459	1,119	4,175
Per farm (hours)	1,915	1,950	1,950	1,820	1,610	1,086	1,561
Hired labor (mil hours)	1,483	495	202	32	....	....	2,215
Per farm (hours)	6,310	1,500	460	90	....	....	828

TABLE 7.—*Income and resources of farms by economic class, projected to 1980*

[1965 prices]

Item	Farms with sales						All farms	All farms $40,000 and over [1]
	$40,000 and over	$20,000–$39,999	$10,000–$19,999	$5,000–$9,999	$2,500–$4,999	Under $2,500		
1. Number of farms (1,000)	335	355	370	225	160	695	2,140	516
2. Cash receipts plus Govt. payments (mil. dol.)	36,023	10,650	5,550	1,688	600	924	55,435	55,435
Per farm (dol.)	107,531	30,000	15,000	7,500	3,750	1,329	25,904	107,531
3. Realized gross farm income (mil. dol.)	36,635	11,204	5,972	1,880	718	1,479	57,888	56,429
Per farm (dol.)	109,359	31,560	16,140	8,355	4,485	2,128	27,050	109,359
4. Production expenses (mil. dol.)	28,962	7,625	3,746	1,082	387	686	42,488	44,611
Per farm (dol.)	86,455	21,480	10,125	4,808	2,419	987	19,854	86,455
5. Realized net farm income (mil. dol.)	7,673	3,579	2,226	798	331	793	15,400	11,818
Per farm (dol.)	22,904	10,080	6,015	3,547	2,066	1,141	7,196	22,904
6. Total production assets (mil. dol.)	133,287	52,344	29,333	10,307	4,231	12,006	241,508	205,302
Per farm (dol.)	397,872	147,448	79,278	45,809	26,444	17,275	112,854	397,872
7. Land in farms (mil. acres)	602	247	145	57	27	73	1,151	930
Per farm (acres)	1,796	697	393	253	171	105	538	1,800
Cropland in farms (mil. acres)	194	115	81	33	14	21	458	300
Per farm (acres)	578	325	220	145	85	30	214	580
8. Total labor used (mil. hours)	2,100	920	670	325	195	570	4,780	3,235
Per farm (hours)	6,269	2,592	1,811	1,444	1,219	820	2,234	6,270
Operator and family (mil. hours)	642	692	670	325	195	570	3,094	988
Per farm (hours)	1,915	1,950	1,811	1,444	1,219	820	1,446	1,915
Hired labor (mil. hours)	1,459	228	.....	.....	.....	.....	1,686	2,247
Per farm (hours)	4,354	642	.....	.....	.....	.....	788	4,355

[1] See text.

dollars, of around **$110,000** per farm, net incomes of about **$25,000**, and productive assets of around **$400,000** per farm. Implied employment on these farms would be equivalent to about 3 to 3½ full-time men.

Methodology

Analytical techniques used in this appraisal simultaneously project output, demand, and prices for the crop and livestock sectors. Aggregative demand and output response functions primarily reflect relationships and trends of the past 15 years. The supply response in this simple framework depends importantly on the pace of technological advances. And by assuming past trends in productivity, we usually tend to understate technological advances. An acceleration of technology in the production and feeding of livestock could materially influence the livestock sector as well as the demand for feed. Basic data used in the appraisal are series regularly reported by USDA and other agencies relating to domestic use, exports, farm output, prices, income, productivity, employment, and resource use in agriculture.

Chapter 24

Hired Farm Labor in the West

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Introduction and Conclusions

There is no generally accepted definition of the West nor of the western region. In the federal service, various agencies—even agencies within the same department—have different combinations of States to make up their regions. Consequently, the writer has made his own combination for this particular purpose. It is the area of Washington, Oregon, California, and Arizona. These four States have some homogeneity of production and some sharing of a common labor supply. For studying farm labor, nothing would be gained by combining with these the States bordering on the east and northeast, for there is little similarity in farming systems between them and the coast, and no significant interaction with respect to labor supply. If this region were to be extended beyond the four States in terms of functional interrelations, it should be in the Southwest—New Mexico, Texas, Oklahoma, and Arkansas. These are the migratory routes and the sources of recruitment. But the writer has not believed that a larger area would be helpful with respect to the type of paper he has undertaken.

Consequently, the four States have nominally constituted the region. "Nominally" is used because State data on the subjects that are here the centers of interest are sparse or nonexistent. Therefore, I have used national data to a great extent and they presumably have equal relevance to any combinations of States.

Among the four States, California has the characteristics and the history of farm employment that have inspired the most attention by writers and scholars. And, moreover, since California has been the scene of scholarly interest of the writer for many years, that State has possibly been overemphasized. But a counterpart slogan to one well known a few years back would seem to be valid: "If it's good for California, it's good for the nation" (now or later).

Many topics normally included in discourses on farm labor have not been given direct attention. They include housing, education, health, medical attention, child care, community relations, and many related welfare conditions. Predominantly, the state of affairs with respect to all of these is bad.

Intense deficiencies and delinquencies are commonly associated with the people doing farmwork. Out of this association, a causal relation is frequently assumed—that "the migrants" (generic term) are deprived and poor because they are migrants (i.e., farmworkers). Your writer rejects this basis of association between farm employment and poverty for another which more nearly fits with reality: The attributes of poverty and underprivilege possessed by farmworkers are essentially the same as those of all poor and underprivileged. Because farmwork has practically no obstructions to entry, poor people who have limited employment alternatives are found here in large concentrations. But most of any current farmworker population is temporary and transitional. Therefore, the therapy of social policy is properly not to be directed toward them as migrants or as farmworkers. Their needs are those of all not fully competent and underprivileged people—sound mental and physical health, education, training, and protection against discrimination. They are therefore a category of all of the potential clientele of the nation's antipoverty and equal opportunity programs. Their particular needs are to be given equality of access to the programs that are generally intended to develop equal capability to be productive.

Not all farmworkers are in poverty. The aggregate of persons who do some work for wages in American agriculture is extremely heterogeneous. Of all who do some farmwork, only a declining minority have farmwork as their principal activity. Farmwork for hire is not really an occupational category. Many people do some farmwork but few remain at it as a long-term activity.

In consequence of these facts, one cannot meaningfully generalize that the farmworker's situation is this or that. Nor can his needs be stated categorically.

The farm employment economy into which poor and disadvantaged workers enter does not offer much opportunity for self-improvement. It is a scene of chaotic and uncertain employment relations; it lacks the regimen and discipline of a competitive market; it lacks the structure of a labor market, partly because farmworkers are excluded from virtually all labor legislation. Competition has traditionally been among workers, not among employers. With unrestricted entry and work that is divisible, 200 persons may be taken on to share a harvest that could be handled by 50.

This is an area of employment that could be rationalized, i.e., given more of the structure and performance characteristics that are found in labor markets. Doing so would have a two-way benefit: (a) toward the welfare of workers, who would have more certain, longer, and higher paying employment, and (b) toward more efficient use of manpower in the national interest. However, it has to be acknowledged that the declining total employment of persons on farms will be accelerated and total welfare will be improved only if those displaced from agriculture are effectively absorbed elsewhere.

Under the general objective of identifying the factors that associate hired farm employment with poverty and analyzing the approaches that are within the realm of public policy and which might be taken to reduce this association, your writer comes to conclusions that fall into two principal categories:

I. Remediable personal deficiencies.

II. Alterable institutional deficiencies.

With respect to the first category, no new programs are proposed. Rather, since pockets of poverty that have been absorbed into the farm labor force are scattered, obscure, incohesive, and inarticulate, extraordinary efforts are necessary to assure these workers equality of opportunity. But differentiating and grouping them as farmworkers should be avoided insofar as possible.

As to institutional deficiencies, several actions may be taken to give farmwork the form and structure of a labor market and to integrate farmworkers into national manpower policy:

(1) Maintain the recently adopted policy which terminates alien labor importation and requires farm employers to obtain their labor from domestic sources.

(2) Remove the discrimination against farmworkers in the National Labor Relations Act by eliminating their exclusion.

(3) Eliminate the gap between the level of the national wage provision and that for farmworkers. This might be done by a gradual but definite transition period of 3 to 5 years.

(4) Replace the present Farm Placement Service with a Rural Manpower Service that would extend service to all rural employers and workers. It would embrace a comprehensive set of activities.

Employment Levels and Trends

Average numbers of hired workers on farms during 1966 were as follows:

	Thousands
Arizona	29
California	187
Oregon	24
Washington	33
Pacific States (excluding Arizona)	244
United States	1,357

Source: U.S. Dept. Agr. *Farm Labor* reports.

The relative intensity of hired farm labor use in this region is reflected in the fact that in 1966 California's employment alone was 14 percent of the national total, and that of the three Pacific States constituted 18 percent. Moreover, Pacific farm employment has not declined as rapidly as the overall average for the nation. In California, which dominates the Pacific region in farm employment, there was not a clearly established downtrend through the years 1950–61; from 1962 through 1966 there were some sharp declines, which may indicate a new, lower plateau rather than the beginning of a sustained downtrend (table 1).

TABLE 1.—*Indexes of annual averages of hired workers on farms, Pacific States and United States, 1950–66* [1]

[1950 = 100]

Year	United States	Washington	Oregon	California	Pacific States
1966	58	72	65	76	74
1965	64	67	73	77	75
1964	69	80	81	77	78
1963	76	85	84	83	83
1962	78	80	81	87	86
1961	81	80	73	95	91
1960	80	80	70	94	89
1959	83	85	78	94	91
1958	84	85	78	92	89
1957	81	83	81	91	89
1956	82	78	78	94	90
1955	87	83	81	94	91
1954	88	89	84	96	93
1953	90	91	84	98	95
1952	92	93	89	98	96
1951	96	96	92	100	98
1950	100	100	100	100	100

Source: U.S. Dept. Agr. *Farm Employment, 1950–57*. Agr. Market. Serv., Statis. Bul. No. 236, September 1958; and current issues of *Farm Labor* reports.

[1] Employment estimates for Arizona are not available prior to 1962.

That employment of hired farmworkers in the Pacific region has not declined in accord with the national trend is surprising in view of the significant labor-saving advances affecting these States, California particularly. But apparently the increased acreages and yields of the labor-intensive fruits and vegetables have increased labor demand nearly as much as mechanization in other crops has decreased it.

Since the majority of hired farmworkers are employed only temporarily and seasonally, an average for the year of those working through months of high employment and low is not a very accurate measure of the total amount of work done (i.e., man-days); nor is it a measure of the total number of different persons who contributed, in varying amounts, to the aggregate of work done. For example, in 1964, *average* employment for California was estimated to be 190,000 persons whereas 570,875 *different persons* contributed some farmwork at some time during the year. The reason for so wide a difference in these two magnitudes is that a very large proportion of those doing *some* farmwork are occupied therein only a few days or a few weeks, particularly if they are school youth or women who are not in the labor market during the full year. As the level of participation in the farm labor force is variable from one area to another and from year to year, there is no stable relationship between annual averages, total number of different persons, or (when occasionally available) man-days of employment. There is no single measure of farm employment that is fully satisfactory for most uses (*1, 2*).[1]

Nevertheless, to know something nationwide and by States about directions of change in farm employment, if not its absolute magnitude at any point in time, one has no better choice than the U.S. Department of Agriculture series obtained through the crop and livestock reporting system.

One way to examine the meaning of a statewide annual average of persons employed on farms is to determine the ratio of the monthly averages to the annual average. This has been done for the three Pacific States for the periods 1950–52 and 1964–66 (table 2). These ratios are to be read in the following manner: For Washington, June employment was 1.78 times the annual average in the earlier period, and 2.06 times the average in the later period. The ranges between the months of low and high employment give an indication of how seasonally variable employment was for the particular State and time period. For Washington, in the earlier period, peak employment was 5.81 times the low point, and in the later period the seasonal variability declined to a ratio of 4.3. In Oregon, seasonal variation increased, owing principally to higher peaks in June, July, and August. California, with much greater diversity of crops and a longer spread of activity, has (as a statewide average) less extreme seasonality.

The question is sometimes raised as to whether the sharp seasonal peaks have not been eliminated by mechanization. This question was the reason for comparing the seasonality pattern of 1950–52 with that of 1964–66 in table 2. The results show that changes in mechanization have not substantially reduced the extremity of seasonal variation in farm employment even though total (and average) employment per year have declined.

The Labor Force: Composition and Participation

The "facts" that are widely known about west coast farm employment—that machines are being substituted for hand labor in many harvests and

TABLE 2.—*Seasonality patterns of farmwork*

Period	Washington		Oregon		California	
	1950–52	1964–66	1950–52	1964–66	1950–52	1964–66
January	.31	.36	.30	.35	.76	.80
February	.36	.52	.45	.48	.74	.76
March	.54	.63	.63	.60	.75	.78
April	.83	1.09	.97	.81	.81	.90
May	1.18	1.12	1.13	.88	.97	1.04
June	1.78	2.06	1.64	2.62	1.11	1.17
July	2.12	1.62	1.97	2.16	1.10	1.12
August	1.86	1.47	1.69	1.90	1.26	1.19
September	1.27	1.20	1.44	.89	1.41	1.43
October	.90	1.08	.93	.66	1.33	1.22
November	.51	.50	.52	.37	.96	.83
December	.34	.33	.35	.29	.78	.74
Low 3 months av.	.33	.40	.37	.34	.75	.76
High 3 months av.	1.92	1.72	1.77	2.23	1.33	1.28
Ratio of high to low	5.81	4.30	4.78	6.56	1.77	1.68

Source: Derived from table 1. See text for explanation.

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

that the work is seasonal, irregular, and short-term —have a corroborating statistical foundation in the data previously discussed. We know something of the magnitudes of the numbers of persons doing farmwork; we know much less about who these persons are, where they come from and go to, how long they are at work at several types of employment and at various locations. The widespread use of the term "migratory" without a precise definition of its meaning adds confusion to the little knowledge we have. People who are harvesting seasonal crops are often called migrants when they actually maintain their domicile year-round in a nearby town and commute to various seasonal jobs. A person who is actually migratory in practice is one who takes his family through a series of locations and relocations during part of the year, then returns to his home base and repeats a similar cycle of movement in following years. He may be an intrastate or interstate migrant depending on whether he crosses State boundaries. Such migratory workers, assuming they are not highly paid entertainers, businessmen, or skilled craftsmen (in which case they will not likely be called *migrants*) will usually be seasonal crop workers. But in most situations, nonmigratory crop workers will be in the majority, if not the total of the farm work force.

Whether migratory or not, seasonal crop workers have similar problems in earning a living. Then why emphasize the distinction between migratory and nonmigratory? Just because it makes a great deal of difference in the attitudes and behavior of local and county education, health, and welfare administrators toward the people. When there is a residence criterion to be proved, the general image of "migrant" (i.e., nonresident) is not readily overcome, and the population under discussion is not well blessed with sophistication and powers of persuasion.

The deep and abiding impression of migrancy can be explained in part by the fact that in earlier years migratory workers did play a somewhat larger role in the seasonal crop picture. In the 1930's, it was commonly said that the Pacific coast migration pattern involved 150,000 to 200,000 persons (whether only workers or all population was never quite clear). In retrospect, it is quite clear that at least half of that movement was relocation migration rather than continued migrancy. Net inmigration to California of all people during the 1930's was only a fraction of what it has been in subsequent decades. But given the adverse employment situation of the 1930's, those with farm backgrounds and others as well had no better choice than to flood the farm labor market for whatever they could get, which involved a great deal of moving about.

With respect to seasonal and casual labor, the migratory family epoch beginning in the 1930's was successor to the earlier single-male episodes (hobo, IWW, Chinese, and Japanese), especially in California. With this as a background and under the chaotic employment conditions of the thirties, the exaggeration laid upon the migratory family worker is perhaps comprehensible. But the survival of the exaggeration and confusion does damage to public policy development as well as to local welfare administration. The policy matter will be elaborated in a subsequent section.

The problem of distinguishing between relocation migration and occupational migratoriness has not been solved. Nevertheless, the U.S. Department of Labor's Farm Placement Service and its cooperating State services have been endeavoring to identify farmworkers according to whether they were local residents, or intrastate or interstate migrants. Also, the U.S. Department of Agriculture, in a series of national surveys published under the title *The Hired Farm Working Force*, has classified its data as between migratory and nonmigratory. These two sources have contributed significantly to our understanding of the farm labor population and its employment and income situations.

In terms of peak-season numbers of migratory workers, the Pacific States continue to be a prominent part of the national total. In 1966, California ranked first, Oregon fifth, Washington eighth (*3, Jan. 1967, p. 53*). In 1965, 18 of the 50 leading migratory labor counties were in the three Pacific States, California alone having 12 of the 50 (*3, Nov. 1966, p. 21*). Yet the proportion that migrants were of all hired farmworkers was not overwhelming. At the peak of migratory labor employment in 1966, migrants constituted the following percentages of State total hired farm labor employment: [2]

	Intrastate Percent	*Interstate Percent*
California (September)	20	12
Oregon (August)	3	22
Washington (October)	15	39
Arizona (December)	12	13

TABLE 3.—*The farm work force at peak of migratory employment, 1966*

State	Peak month	Total	Local	Migrants			Foreign
				Total	Intra-state	Inter-state	
California	Sept.	179,850	114,200	57,800	35,600	22,200	7,850
Arizona	Dec.	19,822	14,975	4,847	2,355	2,492	0
Oregon	Aug.	76,530	57,260	19,270	2,650	16,620	0
Washington	Oct.	29,320	13,700	15,620	4,293	11,327	0

Source: U.S. Department of Labor, Manpower Administration. *Farm Labor Developments*, January 1967; and ***Employment and Wage Supplements*** for September, October, and November 1966 and January 1967.

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[2] Percentages derived from table 3.

Since farm labor arrangements vary widely by crop and by area, and even from one year to the next, the possibilities of valid generalizations on specific matters are severely restricted. For example, the proportions of migrancy, discussed above, would be found only in very few crops or areas of California. Aggregate data (estimates) need to be supplemented by local field studies, and even these must be regarded as having the possibility of becoming ephemeral very early.

Two detailed field studies were made in California in 1961 and 1964 by William H. Metzler (*4, 5*). Notwithstanding that some changes already have occurred—mainly the termination of the bracero program—these studies are a valuable complement to State and national statistical estimates for they enable a closer view of the details of reality in specified situations.

Four tables from the Metzler studies relating to migrancy, composition of the labor force, and work participation, are included herewith as tables 4 to 7. The two counties—Kern and Stanislaus—are located in San Joaquin Valley, one of the principal agricultural areas of the nation. Notwithstanding that both counties have had highly productive agricultural industries for almost a century, no stable system of production or labor use has evolved. The contents of the four tables suggest some of the complex of forces that motivate and propel the workers who at one point in time have been found doing some farmwork or are associated with such families. In both counties, large proportions of the populations met the definition of nonmigrant for the year and large proportions regarded that county as their home. Yet, considering that many identified as nonmigrant and declaring the county to be their home had been in the county only quite briefly, one has the impression that stable work and home is a goal more hoped for than realized. Whereas three-quarters of the Kern County households said their home was in that county, only 19 percent said they owned a home there. Metzler (*5, pp. 44–45*) described the process of acquiring a home:

> The settling process of farm labor households in Kern County tends to go through a number of stages. When they first arrive they are likely to live in a labor camp of some type, one of the large grower association camps, a grape camp, or a cabin at the headquarters of a labor contractor. The next move is to rent a cabin or house in the farm labor section of one of the cities or towns close to their place of employment. The next move is to buy or build a home of their own. Most of the houses in the farm labor sections of cities in Kern County have been built by the workers during the slack season of the year. Although these houses are simple and not always well-kept, the workers express a high degree of satisfaction with them.

TABLE 4.—*Migrancy of farmworkers, Kern County, 1961, by ethnic group, major employment of head, household status, and crop specialization*

Group	Total workers reporting		Migrancy of workers			
			Local nonmigrant	Local outmigrant	Inmigrant	
					Seasonal	Permanent
	Number	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Ethnic group:						
Anglo-American	330	100	54	24	21	1
Spanish American	175	100	58	15	24	3
Mexican	79	100	10	10	56	24
Negro	84	100	85	5	5	5
Other	28	100	46	15	32	7
Major employment of head:						
Year-round	124	100	88	....	9	3
Short-term regular	127	100	53	29	16	2
Seasonal	333	100	42	20	33	5
Processing custom	63	100	54	22	24	....
Nonfarm [1]	49	100	47	6	29	18
Household status:						
Head	361	100	59	17	20	4
Wife	156	100	60	16	22	2
School youth	70	100	44	29	19	8
Nonschool youth	93	100	39	13	46	2
Other	16	100	....	6	56	38
Crop specialization [1]:						
Cotton only	99	100	70	15	12	3
Potatoes only	59	100	39	20	31	10
Grapes only	43	100	42	14	21	23
Cotton, potatoes	48	100	40	20	40	....
Other two crops	114	100	49	16	31	4
Three crops	99	100	43	21	33	3
Four, five, six, seven crops	63	100	17	21	59	3
All workers	696	100	54	17	24	5

Source: Metzler (*5, table 12, p. 40*).

[1] Does not include 171 workers who did not engage in seasonal farmwork.

TABLE 5.—*Migrancy of farmworkers, Stanislaus County, 1963, by ethnic group, major employment, and household status*

Group	All workers		Migrancy					
			Local		Seasonal inmigrant			
			Non-migrant	Out-migrant	Intrastate	Interstate	International	Other inmigrant
	Number	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Ethnic group:								
Anglo-American	437	100	39	22	13	13	...	13
Spanish American	129	100	50	12	10	16	.....	12
Mexican national [1]	198	100	.....	.....	.....	.....	100	...
Green-card Mexican [2]	120	100	2	2	2	1	88	5
Other	21	100	10	33	19	24	9	5
Major work:								
General farm	100	100	33	7	7	14	28	11
Seasonal fruit	403	100	32	23	13	11	13	8
Seasonal vegetable	245	100	8	2	2	4	82	2
Processing	53	100	64	13	6	7	4	6
Nonfarm	104	100	25	9	11	9	24	22
Family status:								
Head	542	100	23	11	9	8	41	8
Wife	148	100	40	22	11	11	1	15
School youth	76	100	33	29	12	17	.....	9
Nonschool youth	48	100	38	4	8	11	33	6
Other	91	100	14	2	3	4	74	4
All workers	905	100	26	13	9	9	34	9

Source: Metzler (*4, table 10, p. 38*).

[1] Admitted temporarily under P.L. 78 which terminated December 31, 1964.

[2] Mexican nationals holding immigration visas under P.L. 414.

A matter interrelated with migratoriness is work participation. Table 4 shows the propensity of workers to be specialists in one, two, or three crops. This is true also as the working group increases in size and complexity, that is, teams of husband, wife, children, other relatives, and associates. This form of work organization tends to specialization and vice versa. Specialized groups will seldom be able to satisfy their preferences without being migratory to some extent. Additionally, if high emphasis is placed upon maximum cash income, a large family work unit has the best chance and therefore is likely to be migratory.

The unanswered question is whether this way of earning a maximum family cash income has any correlation with a maximum real income net of migration costs or with a maximum welfare income, each member of the family considered. Perhaps ironically, one must make a distinction between working under compulsion as against free choice. When housewives and school-age youths who are not normally in the labor market for the full year can individually choose whether and where to do farmwork temporarily, that is a situation quite different from that of a migratory family unit where work is required by family necessity or by the will of the head of the household.

Yet another influence bears upon worker specialization and therefore upon labor force participation: it is often termed the "stoop labor stigma" (*4, pp. 68–70*). It is a form of discrimination syndrome. It is an attitude that tends to be attached to the particularly onerous stoop jobs, such as picking tomatoes, as against ladder picking as in peaches. But the attitude is held mainly by the Anglo-Americans and it tends to identify with areas of "Mexican" employment rather than crops or jobs. The same sort of work can be "stoop" or not depending upon whether or not its recent work force has been Mexican (Mexican American or Mexican national). Employer preference for or prejudice against particular ethnic groups also may contribute to migratoriness. The use of labor contractors further enforces the stigma, for crew composition tends to become ethnically alined with the contractor, and when several contractors are at work on the same farm or in the neighborhood they tend to become ethnically homogeneous, and thus the area is branded.

This is a facet of human behavior that obviously has high costs, especially in labor efficiency and in social divisiveness. It is an impellent to migratoriness.

Finally, piecework wage payment systems contribute to work specialization. Workers who become especially proficient in one or two jobs tend to refuse hourly paid work—another impellent to migratoriness.

Table 6.—*Home area of farmworker households, Kern County, 1961, by ethnic group and migrancy*

Group	Households		Households whose home area was								
			California		Other United States				Outside continental United States		Un-certain
			Kern county	Other county	Texas	Okla-homa	Arizona	Other States	Mexico	Other	
	Number	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Ethnic group:											
Anglo-American	172	100	83	2	2	5	1	3	.....	.....	4
Spanish American	80	100	77	4	12	1	6	.....	.....	.....	.....
Mexican	33	100	27	3	27	.....	3	.....	40	.....	.....
Negro	54	100	94	2	.....	.....	.....	2	.....	.....	2
Other	22	100	53	14	.....	5	5	.....	.....	9	14
Migrancy:											
Local nonmigrant	214	100	100	.....	.....	.....	.....	.....	.....	.....	.....
Local outmigrant	60	100	98	2	.....	.....	.....	.....	.....	.....	.....
Inmigrant [1]	87	100	.....	13	26	13	10	8	15	2	13
All households	361	100	76	3	6	3	2	2	4	1	3
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Number of households	361	.....	274	11	23	11	9	7	13	2	11

Source: Metzler (*5, table 14, p. 43*).

[1] Includes 16 households that were moving into Kern County permanently.

TABLE 7.—*Where farm labor households came from, when, and where their home now is, Stanislaus County, 1962–63, by ethnic group*

Item	All workers		Ethnic group									
			Anglo-American		Spanish American		Green-card Mexican		Mexican national		Other	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Origin:												
Born here	9	1	7	3	2	3	.....	.....	.....	.....	.....	.....
Elsewhere in California	97	15	65	26	25	37	.....	.....	.....	.....	7	41
Oklahoma	63	9	62	25	1	1	.....	.....	.....	.....	.....	.....
Texas	56	8	22	9	31	46	2	2	.....	.....	1	6
Arkansas	23	4	23	9	.....	.....	.....	.....	.....	.....	.....	.....
Other States	79	13	68	27	6	9	.....	.....	.....	.....	5	29
Mexico	311	49	.....	.....	3	4	110	97	198	100	.....	.....
Other country	6	1	1	1	.....	.....	1	1	.....	.....	4	24
Total	644	100	248	100	68	100	113	100	198	100	17	100
First year in county:												
Before 1940	35	11	31	13	3	4	[1]	[1]	[1]	[1]	1	6
1940–49	80	24	70	28	7	10	.....	.....	.....	.....	3	18
1950–54	51	15	44	18	5	7	.....	.....	.....	.....	2	12
1955–59	69	21	44	18	22	33	.....	.....	.....	.....	3	17
1960–63	96	29	57	23	31	46	.....	.....	.....	.....	8	47
Total	[1]331	100	246	100	68	100	.....	.....	.....	.....	17	100
Home base:												
Stanislaus County	224	35	171	73	39	57	10	8	.....	.....	4	33
Other county in California	31	5	17	7	10	15	2	2	.....	.....	2	17
Oklahoma, Texas, Arkansas	42	7	18	8	18	26	3	3	.....	.....	3	25
Other State	36	6	30	12	1	2	2	2	.....	.....	3	25
Mexico	294	47	.....	.....	.....	.....	96	85	198	100	.....	.....
Total	[2]627	100	236	100	68	100	113	100	198	100	12	100

Source: Metzler (*4, table 8, p. 35*).

[1] Data not obtained for Mexican workers.

[2] Data not obtained for 17 workers.

Notwithstanding the many forces toward migratory patterns of work response to seasonal labor demands, the fact is that migratoriness is declining. Machines are eliminating some of the largest seasonal labor needs; short-term labor market participants—mainly school youth and housewives of local communities—are supplying larger proportions of the seasonal labor demand; the growth of nonfarm industry in rural areas has enabled more workers to combine farm and nonfarm employment toward a localized full year of employment.

Temporary work force participation by women and minors and interindustry work patterns are forms of participation. But they can be discussed more effectively in the context of employment categories and earnings.

Employment Categories and Earnings

According to estimates of the U.S. Department of Agriculture, there were 3,128,000 persons who did some farm wagework in the United States during 1965 (*6, pp. 18–21*). Of this total, 1,264,000 persons did less than 25 days of farm wagework in the year. As their average was 9 days, their total contribution was 11,376,000 man-days. The 1,864,000 workers who worked 25 days or more averaged 137 days of farmwork, or a total of 255,368,000 man-days. A total of 266,744,000 man-days of labor were performed by all categories of hired workers. If these man-days had been performed by regularly hired, full-time employees, approximately 1 million would have been sufficient. This comparison serves only to emphasize that agriculture is heavily dependent upon the work of more than 2 million persons who have no regular full-time attachment to the industry, and reciprocally, that agriculture does provide short-term job opportunities to numerous persons who do not wish to be full-time labor force participants or are only temporarily available for farmwork.

Only approximately 350,000 persons worked at least 250 days exclusively in farm wagework. At the other extreme, the chief activity for 1,699,000 persons was "not in the labor force," i.e., keeping house or attending school. For 390,000 persons, farm wagework was only incidental to nonagricultural employment. If one assumes that those in these three categories got approximately as much farm employment as they wished, then the remainder should be roughly the number of hired farmworkers who are underemployed—those who would seek additional employment in agriculture or in nonagricultural industry. This number is roughly 1.67 million workers, or perhaps 1 million farmworker families.[3]

The implications for policy and program that are associated with these categorical divisions of the farm labor force will be considered at a later stage.

Proportional relations and participation levels among the employment categories undoubtedly vary considerably by region, State, and locality. Yet, not much information is available at any of these levels. Consequently, one must rely upon national data, supplemented as possible by local measurements. California fortunately has a new and continuing source of data which is a byproduct of its disability insurance program wherein farm employers are required to report quarterly on their employment and wages paid to individuals. The information obtained is only that which is required for the administration of the insurance program and hence is sparse in research content. Consequently, its content does not match the U.S. Department of Agriculture annual report series. Nevertheless, some reports have been issued by the California Department of Employment that are useful to one wishing to have knowledge about the composition and participation of the California farm labor force.

During 1964, some farm wagework was done by 570,875 different persons, according to the California Department of Employment (*7, table 1*). The average level of employment for 1964 produced by this large number of workers was 190,000, according to the Farm Labor reports of the U.S. Department of Agriculture. Consequently, one can generalize this ratio to say that under the prevailing system of labor use, it took three persons to do the work equivalent of one fully employed person. This is the same 3:1 ratio as was found to apply nationally.

The California data permit classification by age and sex, and by numbers of quarters in which some farmwork was done—either in agriculture only or in agriculture and nonagriculture combined. Except as reflected by earnings, it is not possible to know the intensity of work within the quarter, and it is not possible to determine the chief activity for individual workers.

Table 8 gives the percentages of persons in each component of the California farm labor force, as it was in 1964. Note that farm labor appears to have been a "regular" occupation for only 19 percent of all who did some farmwork. But as will be shown later, if the "regular" worker is defined as working only in agriculture for the same employer and being fully employed, then the regular proportion is far below 19 percent. At the other extreme, one notes the large proportions working only within one or two quarters—overall, 47 percent. One must be cautioned that this does not say they worked one or two quarters, only that they did some farmwork within one quarter or some farmwork within two quarters. Earnings data imply that the typical one- or two-quarter workers did relatively little work within each time period. The large burden of the work is carried by the three- and four-quarter workers. Nevertheless, the short-term workers serve a critical peak need, and reciprocally, if short-term earnings are only supplemental to other sources of income, they can be a valuable supplement to the workers' welfare.

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[3] U.S. Department of Agriculture data (*6*) were the basis for these speculations but none of them is to be attributed to that agency.

TABLE 8.—*Workers doing some farmwork, California, 1964, by categories of employment*

[In percentages of total number employed]

Category of employment	Quarters of employment in California				
	One	Two	Three	Four	Total
All workers doing some farmwork:					
Males	17.5	13.2	13.7	31.5	76.0
Females	10.6	5.7	3.9	3.9	24.0
All	28.1	18.9	17.6	35.4	100.0
Workers doing farmwork only:					
Males	16.1	8.3	7.0	17.2	48.7
Females	10.2	4.0	2.1	1.9	18.2
All	26.3	12.3	9.1	19.1	66.9
Workers doing farmwork and nonfarmwork:					
Males	1.4	4.9	6.8	14.3	27.3
Females	.4	1.6	1.8	1.9	5.8
All	1.8	6.5	8.5	16.3	33.1

Source: Adapted from California Department of Employment. *Research and Statistics Report 830*, No. 3, November 1966, table 7.

The overall median annual earnings for 1964 was $662; for men, it was $1,059; for women, $254. However, with such a diverse pattern of composition and performance, overall averages or medians are not much use. In table 9, the medians of earnings are presented in accordance with the employment categories used in table 8. It is apparent that workers doing both farmwork and nonfarmwork improve their labor market performance considerably over those doing only farmwork, especially those in the one- and two-quarter groups. This is a familiar finding. By combining sources of employment, there is a two-way effect: more total days of employment and an increase in the number of better-paid days. However, this difference decreases and becomes inconsistent among the three- and four-quarter workers. In fact, the male four-quarter workers working in agriculture only did better than those in the farm-nonfarm combination group—$3,181 compared with $2,817. This suggests that the earnings rates per day among the four-quarter workers is about the same as between farmwork and nonfarmwork. If so, the principal contribution of nonfarm employment is to increase the employment base rather than substitute higher for lower paid days of employment.

The California data permit a breakdown to be made by interemployer mobility and earnings. Among the data reported is the number of "wage items." (Each employer's report each quarter is an 'item"; items are collated by social security account numbers.) Workers having only one wage item worked only one quarter and for only one employer; workers with four wage items and working in four quarters very likely worked for only one employer. Two- and three-quarter workers with two and three wage items could have worked only for one employer but the data are not reported in such a way as to determine this. For all persons having wage items in excess of the number of quarters worked, some sort of interemployer mobility is involved. As will be seen in table 10, earnings of four-quarter workers tend to decrease as interemployer mobility increases. Maximum earnings (median is $4,106) for four-quarter workers in agriculture occur only when most or all of them apparently work for only one employer; earnings are the lowest for four-quarter agriculture-only workers (median is $2,138) in the maximum category of interemployer mobility, that is, 10 or more wages items. Similar relations hold for the combination agricultural-nonagricultural workers (bottom half of table 10, where five

TABLE 9.—*Median earnings of workers doing some farmwork in California, 1964, by employment categories*

Category of employment	Quarters of employment in California				
	One	Two	Three	Four	Total
All workers doing farmwork only:					
Males	$84	$397	$1,121	$3,181	$681
Females	76	285	640	1,590	160
All workers with combined farmwork and nonfarmwork [1]:					
Males	203	469	1,130	2,817	1,602
Females	230	374	847	1,580	838

Source: California Department of Employment. *Research and Statistics Report 830*, No. 3, November 1966, tables 15–18.

[1] Earnings for farmwork and nonfarmwork are not separated.

TABLE 10.—*Median earnings by interemployer*[1] *mobility and employment category, California, 1964, male workers only*

Number of wage items[1]	Quarters of employment in California			
	One	Two	Three	Four
Working in agriculture only:				
1	$77	.....	.....	.....
2	122	$343	.....	.....
3	134	354	$1,190	.....
4	200	400	885	$4,106
5	[2]	472	895	3,293
6	[2]	430	892	3,025
7	[2]	477	930	2,814
8	[2]	[2]	1,175	2,853
9	[2]	[2]	1,300	2,157
10 or more	[2]	750	1,341	2,138
Working in agriculture and nonagriculture:				
1	.....	.....	.....	.....
2	$194	$245	.....	.....
3	238	485	$825	.....
4	[2]	525	1,096	$2,220
5	[2]	517	1,183	3,824
6	[2]	680	1,194	3,184
7	[2]	[2]	1,209	2,926
8	[2]	[2]	1,162	3,053
9	.....	[2]	1,133	2,762
10 or more	.....	[2]	1,294	2,225

Source: California Department of Employment. *Research and Statistics Report 830*, No. 3, tables 27 and 29.

[1] See text for explanation.

[2] Medians not computed for categories with less than 50 cases in sample.

wage items would be the least a combination full-time worker could have—probably two employers).

Apparently the moral to be inferred from these data is that if one wants to make money he should try to get a steady job. A more significant conclusion can be drawn, subject to an assumption: If the inter-employer movers do not, on the average, receive lower wage rates (which they very likely do not) then they apparently lose time between inter-employer moves and at a loss rate that increases with the number of moves. Since the structure of farm employment requires interemployer mobility if the workers needed are to be effectively employed, the appropriate conclusion is that an efficient system of multiple-employer arrangements is necessary.

As shown in table 8 the proportion of "regular" farmworkers in California does not exceed 20 percent. Actually, if regular is defined as being employed in agriculture only and *by only one employer*, the proportion of all workers (male and female) that were "regular" was 8 percent. Consequently, 92 percent of California's farmworkers were casual in varying degrees.

Nonfarm employment plays a substantial role in the work program of many, especially among the workers who are active in three or four quarters (table 11).

The California data are not reported in a way that enables one to determine the relative earnings from agriculture and nonagriculture for the persons who did both; that is, which source of employment is supplementary to the other? The U.S. Department of Agriculture's national data do this and the following analysis is derived from it.

TABLE 11.—*Percentages of all doing some farmwork who also had nonfarmwork, California, 1964*

Quarters of earnings	Males	Females
	Percent	*Percent*
One	8	4
Two	37	29
Three	49	45
Four	45	52
All	36	24

Source: California Department of Employment. *Research and Statistics Report 830*, No. 3, table 7.

The percentages of the California farm labor force that had nonfarmwork in 1964 compare closely with the national figures for men (36 and 39 percent, respectively) but are lower for women (24 and 32 percent). These figures suggest that farmworkers in California may not penetrate quite so deeply into nonfarmwork as is characteristic nationally.

The national data (from the U.S. Department of Agriculture) permit further analysis of interindustry work participation, as may be seen in tables 12 and 13. When looking at table 12, it needs to be remembered that of all persons doihg some farmwork there were 1,983,000 who did farmwork only and hence are not included in the table. As is appar-

TABLE 12.—*Days of work and earnings: Workers doing both farmwork and nonfarmwork, United States, 1965*

Days of work and earnings	Chief activity		
	Farm wagework	Nonfarm work	Not in labor force
Number of workers	177,000	390,000	501,000
Farm employment:			
Days worked	165	31	33
Earnings per year	$1,250	$255	$184
Earnings per day	$7.55	$8.05	$5.50
Nonfarm employment:			
Days worked	54	193	57
Earnings per year	$559	$2,574	$261
Earnings per day	$10.25	$13.20	$4.50
Farm and nonfarm employment:			
Days worked	219	225	91
Earnings per year	$1,810	$2,829	$445
Earnings per day	$8.25	$12.55	$4.85

Source: See (*6, table 12*).

ent, the highest average income was earned by the 390,000 persons whose chief activity was nonfarmwork but who also did farmwork for an average of 31 days. Reciprocally, there were 177,000 persons whose chief activity was farmwork and who did an average of 54 days of nonfarmwork. Thus, among these two principal groups of interindustry participants, nonfarm contributors to agriculture were the more numerous (390,00 versus 177,000) and they contributed more man-days to agriculture than the farmworker did to nonagriculture (12 million versus 9½ million). This result is divergent from the usual image which is one of farmworkers obtaining incidental nonfarmwork, without much reverse flow. Differing fully as much from the usual image is that of the persons doing some farmwork but chiefly not in the labor force. There were 1,699,000 such persons in 1965 (*7, table 7*). Of these, 501,000 did both types of work, and, as table 12 shows, nonfarm employment was the heavily dominant source of their employment.

Another view of supplementary relationships between farm and nonfarm employment is contained in table 13. Therein, an incidental point to be noted is that the average income of farmworkers without nonfarm employment was the same as those who were chiefly unemployed. Looking at the aggregate for all categories of work, one is drawn toward the conclusion that nonfarm employment is a quite significant source of income for those who participate to some extent in the farm labor force. Yet, allowing for the fact that the bulk of the nonfarm earnings was concentrated in the hands of the 390,000 workers for whom it was chief activity means that the remainder of those seriously occupied were heavily dependent on agriculture. In other words, nonfarm earnings received by the population which has both farm and nonfarm earnings were

TABLE 13.—*Total earnings in farmwork and nonfarmwork by workers who did both, United States, 1965*

Work status	Workers	Average annual earning		Total earnings [1]	
		Farmwork	Nonfarmwork	Farmwork	Nonfarmwork
	Thous.	*Dol.*	*Dol.*	*Thous. dol.*	*Thous. dol.*
Farm wagework only	1,983	805	......	1,596,315	......
Chiefly farm wagework	177	1,250	559	221,250	98,943
Chiefly nonfarmwork	390	255	2,574	99,450	1,003,860
Chiefly not in labor force	501	184	261	92,184	130,761
Chiefly unemployed	55	321	484	17,655	26,620
Total	[2] 3,106	......	......	2,026,854	1,260,184

Source: See (*6, tables 11 and 12*).

[1] Computed from the basic data.

[2] Work and earnings data were not estimated for 22,000 farm operators and family workers who did some farmwork for wages.

not broadly or evenly distributed but rather were highly concentrated in the small population whose principal activity was nonfarmwork.

To a limited extent, the California data indicate that its employment categories and their performance are similar to the national, but with perhaps even less reliance on supplementary nonfarmwork. It is doubtful that the Pacific coast generally has an integrated relationship between farm and nonfarm employment which permits the latter to be a broadly shared supplement to low farm earnings.

Further comment on this matter is reserved for the concluding section of this report.

Occupational Commitment of Farm Wageworkers

The concepts and measures examined in the preceding sections were all based upon observations of the populations occupying the categories of farm employment in points of time. Our information is sparse in this area but it is more so with respect to the role of farm employment in occupational careers. Is it an inherited occupation? Is it an intermediate stage in upward occupational mobility? Or a plateau in downward mobility?

In American agrarian philosophy, which centered upon the doctrine of the family farm, hired farmwork was not considered to be a permanent occupation but an apprenticeship, the ultimate occupation to be a self-employed farmer. But this was an Atlantic idea and was never successfully transported to the West, especially not to California where the land system did not conform to the Homestead Act.

The concept of the "agricultural ladder"—farm laborer-renter-farmowner—has always been more ideological than real. Nevertheless, entry was easy and a few made it. However, at this stage of history, after decades of negative evidence, one would scarcely expect many farmworkers to say they entered this work in the expectation that it was a way to become an independent farmer. Nor are many likely to say they deliberately chose it as an occupation.

Duncan and Cowhig have recently published a paper that contributes a new dimension to knowledge of the hired worker in agriculture *(8)*. Among their significant findings are the following *(8, pp. 130–133)*:

(1) The occupation is not inherited: "Only one in nine farm wageworkers . . . had a father who was a farm laborer at the time the respondent was age 16."

(2) The majority, though not specified, "represent recruitment via downward intergenerational occupational mobility. That is, the great majority of men 20 to 64 years old employed as farm wage workers in 1961 had fathers who were employed in higher status occupations"; hence, "downward mobility, rather than the 'inheritance of poverty' which figures so prominently in current public discussion, is the prevailing route to farm wagework."

(3) There is reciprocal upward mobility because "just one in six men with the occupational background that would seem most likely to lead to this kind of work actually accepted such employment, while the remaining five-sixths underwent some degree of upward mobility."

(4) Casual and temporary recruitment: "The present analysis shows that the casual component of the farm work force is more likely to be recruited from nonfarm origins than the noncasual. . . . Among men with farm background, the high rate of recruitment to farm wagework at age 20–24, followed by the precipitous drop at ages 25 and over, suggests that even this segment includes many with only temporary involvement in farmwork."

The authors conducted their study through the Current Population Survey of the Bureau of the Census, with a questionnaire supplement. The population segment to whom questions were addressed were males who in March 1962 were 20–64 years of age and whose longest employment during 1961 had been in farm wagework—a population estimated to be approximately 1.2 million (nationwide).

Californians having knowledge of farm labor affairs in their State would not likely be astonished at the findings of Duncan and Cowhig as regards the turnover of personnel. An awareness remains of the ethnic succession of the Chinese, the Japanese, the Hindustanis, the Filipinos, the Mexicans (Mexican Americans, Mexican immigrants, Mexican wetbacks, Mexican braceros), the Okies and Arkies, and most lately, the Negroes (but not in major proportions).

California's pioneers were aware that they were initiating a system of cultivation that would prove to be troublesome, as was reflected in the first biennial report of the State Bureau of Labor Statistics, 1883–84:

> Hitherto the one great objection to an increase of the unskilled white labor population in California has been, that necessary as it was to have more help during the summer and harvest, the manner of husbandry in this state was such as to assure those who labor for others, work only for three, or at the highest, five or six months during the year. It was admitted to be an unnatural condition of affairs, and one which should be remedied, but which, under prevailing circumstances, could not be changed, especially as long as Chinamen in sufficient numbers could be hired during the busiest seasons of the year. . . . The coming of Chinamen was tolerated and encouraged for many years. As a natural consequence they made for themselves a place in the industrial economy of the State, preventing thereby the natural increase and provision for a white laboring population. Employers could not expect white laborers to spring out of the ground when the Chinese influx ceased; nor can they now expect to remedy the evil, which a short-sighted policy . . . brought upon them, without suffering the consequences. But the great danger is that they are unwilling to suffer these consequences and rather than undergo the annoyance of a settlement which would, once for all, put the questions of labor upon a right basis, they will look to the immediate future and continue to encourage or begin again to encourage Chinese immigration. . . . If the size of their landed estates and the mode of cultivating them preclude the em-

> ployment of civilized labor under civilized conditions, it is better that such estates lay waste, than that they be made the means of perpetuating the coolie system.

But even though the immigration of Chinese laborers ultimately stopped, and that of successor groups as well, the change to a less "unnatural condition of affairs" was never achieved. Perhaps the termination of the Mexican national (bracero) program in 1964 comes the nearest to achieving that goal.

In 1959, this writer testified to the California State Senate Fact Finding Committee on Labor and Welfare with respect to subject matter closely related to occupational commitment and farm employment. A portion of the comments made are relevant and still valid:

> The typical employment relation in seasonal agriculture is utterly barren. The man who picks or chops cotton or does similar work in fruits or vegetables enjoys none of the features that stabilize employment relations or give the worker any sense of identification with the employer, with the industry, or with the work force. Very frequently, seasonal farm workers do not know the names of the farmers on whose places they have worked; not always do they know the real name of the labor contractor who brought them there. The worker frequently does not know whether the farmer or the labor contractor is the actual employer. Since the great majority of the work is done at piece rates, neither the contractor nor the farmer hires *people as individuals.* [Since 1961. under the disability insurance program, this no longer is true.] With the work being done at piece rates, neither farmer nor contractor is much concerned whether a hundred boxes of tomatoes are picked by two workers or by ten, so long as they get picked. In a similar way, there is little concern whether those who are picking today are the same as those who picked yesterday or last week or last year, so long as there are enough hands to get today's job done on time.
>
> The foregoing remarks are intended to describe the general and dominant attributes of this particular structure of labor use; I do not mean to assess blame, nor do I mean to imply that every individual situation has the characteristics of the general situation. This system of labor use did not initially evolve as a deliberate choice of present-day labor users. In important respects, the users are as much the victims of the system as are the workers. When the users state that domestic workers are unreliable, they are stating a truth. It is a truth that is inherent in the system. It is a consequence of the fact that temporary work in agriculture is taken mainly by persons who chronically or intermittently can get nothing better to do. and when something better appears, they leave. Hence, when nonagricultural employment is high, farm workers are scarce; when other employment is slack, farm workers are in surplus.
>
> Varying episodes—such as depressions and recessions, immigrations of underprivileged from undeveloped countries, and migrations from depressed sections of this nation—have combined with other factors such as discrimination against age and color, the prevalence of mental and physical ill-health, and neglected vocational rehabilitation to maintain a substantial population segment with very restricted employment alternatives. Such persons find acceptance and usefulness in agriculture; yet they can scarcely be expected to develop a feeling of obligation to employers who show few, if any, feelings of obligation for them.
>
> In a somewhat obscure way, temporary farm work is as much a conjuncture of unsolved social and economic problems as it is an employment category. The cause and effect relationships that appear in this conjuncture are sometimes confusing. When the workers are found to be poor or destitute, farm wages and employment conditions are often blamed. Actually, the cause and effect relationship, at least initially at the time of entry into farm work, may be more the other way. The people have not *become* poor from working in agriculture; they have become agricultural workers because they were already poor. Thus, in the sense of providing an opportunity for those not accepted elsewhere, temporary farm work may be regarded as ameliorating poverty rather than causing it. Moreover, it is to be noted in this connection that many individuals and groups have made their way through temporary farm employment and into more acceptable situations, in agriculture and elsewhere. Hence, it has not been entirely a dead end.

Prospects of Unionization and Collective Bargaining

When the bills which became the National Labor Relations Act of 1935 were reported from committee, the Senate committee chairman said *(9, p. 143)*:

> For administrative reasons, the Committee deemed it wise not to include under the bill agricultural workers.

And the chairman of the House committee said *(9, p. 144)*:

> . . . the committee discussed this matter very carefully in executive session and decided not to include agricultural workers. We hope that the agricultural workers eventually will be taken care of . . . certainly I am in favor of giving the agricultural workers every protection, but just now I believe in biting off one mouthful at a time. If we can get this bill through and get it working properly, there will be opportunity later, and I hope soon, to take care of the agricultural workers.

On August 30, 1966, the Subcommittee on Migratory Labor, Senate Committee on Labor and Public Welfare, 89th Congress, Second Session, reported *(10, p. 35)*:

> Neither Federal nor State laws provide meaningful collective bargaining rights for agricultural workers. The National Labor Relations Act specifically exempts the agricultural worker from its provisions. The migratory worker because of his brief periods of employment is particularly hard hit by this exemption. His continuous mobility and the rapid fluctuations and demands for farm labor detrimentally affect his bargaining positions. . . . The benefits of the collective bargaining rights and procedures of the National Labor Relations Act should be extended to our citizens employed in agriculture. Consideration should be given to the possible desirability of new concepts which may be more suitable to a mobile, seasonal agricultural labor force than those afforded by the present Federal labor laws. For example, jurisdiction standards for the National Labor Relations Board could be revised to meet the special problems of agriculture. Furthermore, a thorough review of this subject may demonstrate the need for an accelerated election procedure as well as an administrative board which deals exclusively with collective bargaining rights in agriculture.

In May 1967, after 32 years, farmworkers are still on their own. For "administrative reasons"? Because not once in 32 years was there the appropriate time for biting off another mouthful?

Notwithstanding their exclusion from the protective rights of the National Labor Relations Act, small-scale attempts have been made occasionally to unionize among farmworkers. There have been isolated instances of success in forming nucleus union memberships. But they seldom got bargaining recognition from employers and ultimately eroded away. Among crop workers, the exceptional instance was sugar and pineapple workers in Hawaii who were organized by the independent west coast longshoremen. More recently, collective bargaining relations for the first time have been established for crop workers in California—with a few employers associated with the grape industry of Delano, Calif.

In the absence of NLRB jurisdiction, the union organizers could not petition for an election to determine representation and there was no agency to which charges of unfair labor practices could be taken for resolution. Hence, strikes and boycotts have been the main reliance to persuade farm employers either to recognize the union directly and voluntarily or to agree to participate in a voluntary election. These tactics of persuasion are abrasive and expensive and they are vulnerable to adverse effects upon parties not directly involved. Moreover, they are inconclusive. Winning representation rights does not automatically obligate the employer to any specific form or content of bargaining; hence, further rounds of pressure tactics, court actions, and whatnot may be the only way to establish effective collective bargaining.

One of the principal functions of the NLRB is to resolve conflicts between rival unions where two or more are contending for representation rights. At present in the California situation the AFL-CIO's amalgamated union and the independent Teamsters Union are contenders. Consequently, the issue to be resolved is likely to be a three-way one—Union X, Union Y, no union—which in the absence of preexisting machinery is an infinitely greater issue to resolve than a simple two-way one—union or no union.

These complications notwithstanding, the few successes that have been scored in California in the past 2 years have given great optimism to the advocates of farm labor unionization. Whether this optimism is warranted depends on the balance of several forces which operate both for and against such a development. We will consider pro and con forces under the following headings.

Vertical Integration of Agricultural Industry

It is significant that when collective bargaining has been established for farmworkers (that is, field or production as distinguished from processing workers) farm production has been allied by contract or ownership to processing, handling, or manufacturing. Also, in these instances, collective bargaining has already been established in the processing segment. In integrated arrangements, there are several kinds of opportunity for the established unions on the processing side to influence management's attitude with respect to fieldworkers. Contractual and ownership integration—sometimes called agri-business—is likely to increase. Consequently, this development, in combination with the strong commitment of other unions to aid the unionization of farmworkers, should be a strong prounion factor.

Union and Public Support

More direct and vigorous roles are being taken by AFL-CIO and constituent as well as independent unions, by churches, and by organizations based on civil rights, minority groups, and related causes. Urban newspapers are tending to be more sympathetic. Even though churchmen, local authorities, and community leaders within the areas affected by organizing attempts have appealed for noninterference, outside concern and interest shows little evidence of diminishing. External interest and action may reasonably be expected to continue, and possibly to increase, and if so, they are likely to have significant influence upon the attitudes and actions of both workers and employers.

Congress May Amend the National Labor Relations Act

It is coming to be realized—by citizens generally and by some farm employers as well—that the benefits of the NLRA are not enjoyed alone by union organizers seeking to establish collective bargaining. In the absence of a procedure under law by means of which the legitimacy of demands for union recognition can be tested in an orderly manner, the only alternatives are pressure and force. As instruments of determination, these are volatile—they spread their impact widely upon other than the direct parties, and they can readily become disruptive and possibly violent. Consequently, there is substantial general interest in having available a lawful procedure to determine if a collective bargaining organization exists. Senate bill 1866 of the 89th Congress, introduced in April 1965, would amend the National Labor Relations Act to remove the present exclusion of farmworkers. In hearings held by the Senate Subcommittee on Migratory Labor in the latter part of 1965 and early 1966, the various farm organizations offering testimony were opposed, with very few exceptions. Nevertheless, the subcommittee's conclusion was affirmative as seen in the quotation in the beginning of this section.

Moreover, Senator Murphy of California in his individual statement as a minority member of the subcommittee seems not seriously to disagree with the majority conclusion, for after discussing some of the technical differences between farm and factory employment, he concludes (*10, p. 35*):

> These questions are not insoluble. I have no doubt that the Congress, once alerted to the complexities of the situation, could provide workable guidelines for collective bargaining by farmworkers while at the same time preserving freedom of choice and equality of bargaining power. But the situation calls for careful analysis and good judgment, and not a headlong rush to apply to agriculture a legislative scheme which needs special tailoring to avoid a misfit which would be more of a hindrance than a help.

Even if the legislative outcome is ultimately affirmative, action is not likely to be rapid. Neither the prospect of labor relations legislation nor the forces and influences mentioned above are likely to generate a momentum parallel with those in steel, automobiles, or coal mining during the 1930's. On the contrary, it seems reasonable to believe that the constraints will be substantial and that no great wave of farm labor unionization is in prospect. Some of the more apparent constraints are considered below.

Farm Employment Will Continue to be Predominantly in Small-Scale, Broadly Scattered Units

Although average size of farm has rapidly and consistently risen, employment per unit is not following the same trend, due mainly to the advance of technology. Employment in large numbers per farm unit seldom occurs except in temporary harvest periods. Farms having 5 or more year-round hired men—usually dairies, stock ranches, or poultry farms—are few and exceptional. Small units and distance as well as close relations with a working employer are obstructive to union organization.

Seasonal Workers Are Not Generally Responsive to Unionization Appeals

Many expect not to be permanently in farmwork and do not regard an improved future in farm labor as a goal worth striving for. Those who are resolved to a future in farm labor—which inevitably means mostly older, less educated, and otherwise handicapped persons—are typically neither well prepared nor strongly motivated toward purposeful collective action.

High Cost of Organization Without NLRA or Similar Coverage

If farm labor continues to be excluded from statutory coverage, efforts to obtain recognition as bargaining agent and to obtain agreements will have to depend upon force and pressure, which are expensive and uncertain. Therefore efforts to organize will likely be restricted to selected situations in which the prospects of success appear most favorable.

Administrative and Legal Frictions Under NLRA Coverage

Even if statutory labor relations coverage were soon to be available there would be frictions to its rapid and widespread use. If the coverage were to be under the present legislation, considerable adaptations would be required to accommodate to the particular features of farm employment, including such matters as the appropriate bargaining unit and the eligibility of voters. Court action is likely to be involved, as well as evolution of administrative procedures. On the other hand, if the coverage were to be in different legislation specialized to agricultural employment, along the lines implied by the report of the Senate subcommittee, the pace of utilization would not likely be any more rapid, for the backlog of administrative experience and court decisions under the NLRA will probably not be directly relevant. Time will be required to develop procedures and practices in accord with the authority of such a statute. Consequently, either way it goes, taxing demands upon the time and resources of the principal parties as well as upon the administrative agency seem to be unavoidable—assuming, of course, that farm employers continue to oppose collective bargaining.

The assessment that seems reasonable to me is to expect a new and more broadly supported stride in the development of farmworkers unions and collective bargaining, but under very substantial constraints. Initially, and perhaps for many years, the pattern will be quite spotty. Even so, the total impact of limited unionization may very well be greater indirectly than directly. Farm organizations are already increasing their appeals to members to upgrade employment practices and conditions as a deterrent to union organization.

Defining the Relations Between Poverty and Farm Employment; Distinguishing Antipoverty Approaches

From the sorts of evidence considered heretofore, one can scarcely avoid concluding that doing farmwork for wages is unlikely to be a permanently satisfactory occupation for most of those who do it. The 40,725 California male workers who in 1964 were employed during some or all of four quarters by the same employer and earned a median income of $4,106 were most probably career farmworkers.[4] But for each male in this category, there were nine other males who did some farmwork in California but whose participation was casual in varying degrees. These varying degrees of casuality can be classified into several categories. For one, why was the median earnings of the 24,550 males working in four quarters at farmwork exclusively, but for multiple employers, only $2,138?[5] These are year-round farmworkers trying to piece together a year-round income from a series of temporary jobs but earning only approximately one-half what the steady job workers earn. They apparently are losing a great deal of time between jobs. Except as they may individually be able to develop less casual farm job arrangements, most of these (especially the younger ones) are likely to move into stable nonfarm occupations, when and as possible.

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[4] Quite possibly this category includes some skilled and professional workers who were employed on large farms. Occupational skill categories are rarely used in statistics of farm labor.

[5] Median earnings for four-quarter workers declined continuously with increased interemployer mobility.

What of the males who worked in only three quarters, either entirely in agriculture or in a combination of farm and nonfarm jobs? There were 73,575 of these, with median earnings of approximately $1,100. A reasonable hypothesis about this group is that they are adult full-year labor force participants who were unable to get work in all four quarters. But this is found not to be wholly true; of 37,350 three-quarter workers employed only in farmwork, approximately one-fourth were 21 years and under. A substantial proportion of them were apparently doing part-time work while in school, as well as temporary part- or full-time work in nonschool months.

In the one- and two-quarter groups, one would expect to find a dominance of youth: The data confirm that this tends to be true but not strikingly so. The number of males aged 22 to 50 in the one- and two-quarter employment groups in agriculture exclusively exceeds slightly the number aged 16 through 21 years. Altogether, there were approximately 70,000 males in the age range of 22 through 59 who did some farmwork in California in 1964 but were in the State's employed labor force only in one or two quarters. What persons are these and what are the circumstances of their farm labor participation? Some may be interstate migrants; some may be the "wino" or "skid row" types (including former doctors, lawyers, professors, and politicians) whose downward occupational mobility has about reached the bottom. But these explanations should not account for the majority of so large a total.

Presumably, most of the males under 22 and all females working only in one or two quarters are supplementing other sources of income rather than trying to earn an entire annual income. As their participation is low, so are their earnings. Nevertheless, this segment may be one of the most satisfied with farmwork. Short-term employment, with easy entry, in the out-of-school season is not readily found elsewhere.

The data that are available and the speculations based upon them do not provide satisfactory answers to important questions as regards the interests and income needs of different segments of the conglomerate of persons who "did some wagework on farms." But even so limited an examination as one is able to conduct of the components of this conglomerate serves well enough to warn against broad generalizations on the situation and needs of "the farmworker." Equally it should serve to warn against universal antipoverty policy and program approaches. As has been argued previously, while there is an exceptionally close association between farm labor employment and poverty status, it is not proper to assume that doing farmwork has made people poor.

Since agriculture provides our major open-entry job opportunity, it follows that the reward level (wage rates, privileges, etc.) is low and that the entrants are those who have poor alternatives elsewhere. However, the conditions that have restricted entry into non-farm occupations are frequently temporary or removable. With the attainment of adult age, with acquisition of work experience, with more education or occupational training, and with more knowledge of local job markets (by relocation migrants), upward occupational mobility can and does occur. Also the opposite—downward mobility—can and does occur when unmet mental and physical health needs, including the need for occupational rehabilitation and job training, are obscured as being normal to farmworkers and neglected by the agencies upon which such persons must rely.

If it were to be public policy to reduce, perhaps to minimize, the association between farm employment and poverty, then there are two avenues of approach to be considered. These are not alternatives; the questions are not on the choice but on the balance of emphasis.

One approach goes to the matter of improving the occupational competence of the persons, *as persons*, who would prefer to qualify for a nonfarm occupation. The other approach concerns the characteristics and performance of the farm labor market—should it be made to produce better income results for some or all of its participants, even at the cost of reducing the numbers of those participants?

The first approach (improving personal competence) involves essentially one clientele facet of the general antipoverty or equal opportunity programs. The attack upon remediable personal deficiencies should not be different in content for persons currently being farmworkers. But it may have to be quite different in technique of administration because of the instability, scatter, incohesion, and inarticulation of eligible farmworker populations. Nothing in this approach should be done to increase occupational commitment to agriculture. Housing and training, for examples, if they have a particular relation to agriculture, should be considered under the farm labor market approach.

To the extent that general antipoverty programs succeed in overcoming personal disabilities, they will decrease the supply of labor available to agriculture. Thereupon, if historical precedent holds, there will be urgent demands by organized farm employers to relax border controls on alien contract labor. Were these demands to be met, an abundance of low-opportunity labor would nullify the market pressures toward income and welfare improvement for farmworkers. High-level unemployment in the national economy would do the same thing.

What will happen depends very heavily upon whether the Federal Government succeeds in maintaining its recent policy reversal as to its obligation to supply farmers with workers. During World War II, an an emergency measure, procurement of supplemental foreign farm labor (with very few restraints upon farm employers' own terms) became an obligation of government. That obligation was allowed to stand, through a series of temporary legislative extensions, until 1965. In the 2½ years since the lapse of Public Law 78 permitting the import of Mexican labor, the Secretary of Labor has resisted great pressures to continue importation under discretionary administrative authority even though the Congress, by not extending P.L. 78 beyond 1964, had established a contrary policy. Why foreign farm labor importation was permitted for nearly two decades after other war emergency programs were terminated is a saga of political duplicity.

The borders have not been tightly sealed. Entries in small numbers and under restricted conditions are still occurring.

If present foreign farm labor policy holds and if anti-poverty programs achieve their explicit and implicit objectives and if the country can be kept prosperous—then the insulation of farm labor from the general labor markets should diminish. Farmers will increasingly have to come into a state of competition for their labor supply.

Under this projection, farm wages should rise in relation to the general wage structure and the average amount of employment received per worker also may rise, thereby decreasing the interrelation between poverty and farmwork. But, as will be discussed subsequently, this direction of change could decrease the total numbers employed, thereby increasing the burden of relief and rehabilitation upon the community at large; which is to say that State relief administrations will not be able to depend so heavily upon farm employment to absorb some of their relief load.

Possibilities of Improving the Structure and Functioning of Farm Labor Markets

It is a euphemistic exaggeration to refer to the employment relations involved in farm labor as a "market." At the minimum, a market should be coextensive in space or function with a set of supply-demand relations which interactively move toward an equilibrium adjustment through the mechanism of price. These are not the characteristics of farm employment.[6] In employment situations which can appropriately be called labor markets, there are stable employment relations between individual demanders and suppliers—through payroll identifications, job classifications, pension rights, seniority rights, and the like. Incremental changes in demand and supply can be approximately estimated, especially if there is the bilateralism of collective bargaining. In farm employment, these features are most rare. Rather, farm employment is dominantly a scene of disorder and uncertainty.

Reducing the redundancy of labor supply through measures discussed in the preceding section is a first step toward achieving orderliness and stability in farm employment. Then there are supplemental actions that could be undertaken by and through government to contribute further to reducing disorder and inefficiency in farm manpower use. These actions will eliminate or reduce the discriminatory exclusions of farm labor from national labor policy. The implied consequences are more reliable and regular employment for some, displacement of many, and higher wages and incomes and a nearer approach to a stable occupation for the survivors and their replacements.

Labor Relations

Farmworkers were excluded from coverage under the NLRA for a very simple reason: They had no political power and others who had political power did not want to have any farm labor unions. As was outlined above, the protection of the rights of organization and of collective bargaining will not guarantee results. Nonetheless, only injustice is served by continuing to withhold labor relations privileges from a population segment most in need of them. This matter is particularly relevant to California where much of farm employment is in large units and often is arranged through contractors or other intermediaries.

Wages

The most broadly accepted arrangements for determining wages are by collective bargaining or by free market forces. Nevertheless, governmental determination of minimum rates through the Fair Labor Standards Act (FLSA) has had a prominent role in the American economy. Even though agriculture has been one of the nation's most serious areas of wage deficiency, it has been excluded from FLSA coverage until 1967. Now, under the 1966 amendments, a minimum (actually, a subminimum) wage provision from which small farms are exempt will apply to larger farms, most of which are already paying well in excess of the applicable minimum, initially $1 per hour. Effective application in the first year at the $1 per hour level may not exceed 3 percent of those who work on farms; in the second and third years, at $1.15 and $1.30, respectively, the proportion of workers to whom the law effectively applies should increase modestly.

At the present level of minimum wage for farm labor there will be no more than a few incidental instances of effective application in Washington, Oregon, and California because the average wage level is already approximately 50 percent above the statutory minimum (tables 14, 15). California has numerous farms too large to be exempt from coverage and here the main impact of the law will re-

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[6] One of the recent empiric tests of this was the behavior of wage rates and employment in California after the termination of the bracero program.

TABLE 14.—*Farm wage rates, United States and selected States, October 1, 1950–66* [1]

Year	Arizona	Washington	Oregon	California	Pacific States [2]	United States
1966	$1.13	$1.51	$1.42	$1.55	$1.53	$1.07
1965	1.05	1.40	1.34	1.43	1.42	.98
1964	1.00	1.35	1.30	1.34	1.34	.92
1963	.95	1.34	1.28	1.31	1.31	.90
1962	.94	1.31	1.24	1.28	1.28	.87
1961	.91	1.29	1.21	1.27	1.26	.84
1960	.90	1.26	1.18	1.22	1.22	.82
1959	.89	1.25	1.15	1.18	1.19	.81
1958	.86	1.24	1.15	1.14	1.15	.80
1957	.82	1.22	1.13	1.12	1.13	.76
1956	.83	1.20	1.11	1.11	1.12	.74
1955	.81	1.16	1.07	1.06	1.07	.70
1954	.76	1.13	1.05	1.04	1.05	.68
1953	.75	1.10	1.07	1.04	1.05	.70
1952	.74	1.10	1.07	1.04	1.05	.69
1951	.69	1.08	1.04	.98	.99	.66
1950	.64	.97	.97	.91	.92	.59

Source: U.S. Department of Agriculture. Statistical Reporting Service. *Farm Labor*. Current issues.

[1] Composite rate per hour.

[2] Washington, Oregon, and California.

TABLE 15.—*Farm wage rate differentials from United States average, selected States, October, 1950–66*

[U.S. average for each year = 100]

Year	California	Arizona	Washington	Oregon
1966	145	106	141	133
1965	146	107	143	137
1964	146	109	147	141
1963	146	106	149	142
1962	147	108	151	143
1961	151	108	154	146
1960	149	110	154	144
1959	146	110	154	142
1958	143	108	155	144
1957	148	108	159	149
1956	150	112	161	149
1955	151	116	166	153
1954	153	112	166	154
1953	149	107	157	152
1952	151	107	159	155
1951	148	105	164	158
1950	154	108	164	164

Source: Computed from table 14.

late to low-producing piece-rate workers. Washington and Oregon will not very likely have much effective application because of small size farms and short peak working seasons. The most effective impact in this region should occur in Arizona, where average wage rates are nearer to the minimum and large farms occur with sufficient frequency to have a significant amount of eligibility.

The low level of effective application is a result of the high exemption limit and the low minimum wage. In the low-wage regions where the minimum is higher than prevailing wages, most farms are exempt from coverage because they are small. In the areas of larger farms, where coverage is more extensive, prevailing wage rates are likely to exceed the statutory minimum. Consequently, the impact of present legislation upon the national farm wage structure is not likely to be very great. If it turns out that effective application in the South and Southeast is at all significant, then the legislation may help to reduce long-standing regional wage differences.

How much more could and should be accomplished by a more rigorous minimum wage law—a higher minimum and broader coverage? Should statutory wage minimums be the way to close wage differences between States and regions? Is minimum wage the appropriate means for reducing or eliminating wage differences between farm and nonfarm work, allowing for interregional differences in prevailing nonfarm wage levels?

Although these questions—basically what goal is expected of a statutory minimum wage—are interesting for economic analysis, the fact is they are hypothetical and irrelevant except within the range up to the prevailing general statutory minimum. It would probably be difficult to obtain much agreement as to what purpose is expected to be served by the national minimum wage law in a full employment economy. Nevertheless, it would seem quite foolish to expect Congress to abolish the established program because its purpose could not be agreed upon, and even more foolish to expect that it would agree upon amendments to raise the general minimum high enough to become an active determinant of national wage levels.

For many and various reasons, the national minimum wage is broadly held to have high value and those who are excluded have strong feelings of inequity. Consequently, inequality of treatment under the law is by itself a sufficient justification to commit agriculture to a gradual but firmly scheduled transition to full coverage at the standard minimum wage under the national act.

The maximum hours and overtime provisions of the FLSA do not readily accommodate to the necessary work patterns of agriculture; hence, there appears to be justification for exempting farmworkers from these provisions.

A statutory minimum wage should carry only a supplementary duty in a comprehensive approach to raising wages and incomes—the primary reliances being upon improvement of the worker and his alternatives and upon effective farm labor "market" performance. Successful administration of (for example) a $2-per-hour statutory minimum in the presence of an abundant labor supply willing to work for $1 per hour will be abrasive and vulnerable. With market forces leading the way, a statutory minimum wage that is higher and has more coverage than presently provided can be useful in bringing up the bottom.

Rural Manpower Service

Even though mechanization and technological change will undoubtedly continue to reduce total manpower requirements, there will still be considerable short peaks of seasonal employment. If supply of manpower available to agriculture becomes desaturated by success in antipoverty programs and border restrictions, difficulties may be encountered in recruiting sufficient short-term workers. In the past, farm employers have taken a quite impassive attitude about their prospective needs because they have come to expect government help, if necessary, in obtaining workers—mainly from interstate recruitment or from abroad. In the future, both farm employers and government ought not to rely upon past methods to solve the seasonal labor needs of agriculture. Without the negative recruitment force of poverty, temporary and casual labor needs of agriculture are not likely to be supplied by persons whose interest is in regular full-time employment. Notwithstanding the allegations about migrants that they prefer the life—"they like to follow the sun," "they like the open road," etc.—the fact is that few stay with it when an alternative appears.[7]

To satisfy temporary labor needs, it will apparently be necessary to concentrate more heavily upon temporary labor market participants as prospects. More attention will need to be centered on local labor resources, and radical changes will need to be made in recruitment approaches. At the base, farm employers' attitudes need to change from "it's your privilege to get work here and if you don't like how it is, beat it" to attitudes and actions much more affirmative.

The labor resources being referred to are women whose major activity is at home, school youths, retired men and women, and persons who can find a combination of farmwork and nonfarmwork. The positive recruitment referred to could include some or all of the following: Affirmative and early contact; arrangement of crew organization and supervision; minor skill training; transportation, housing; sanitation in field, drinking water, meals; planning and possibly rearranging of work to the physical capabilities of this category of workers.

In the past, government manpower services in rural areas have generally been limited to the Federal-State Farm Placement Services. It has been a restricted program centering upon recruitment under prevailing wages and conditions, thereby giving sanctuary to farmers against the need of improvement in the terms and conditions of employment.

As Robert C. Goodwin, Administrator of the Bureau of Employment Security, said in his remarks at the National Farm Labor Conference, San Francisco, January 10, 1967:

> . . . there is a need for a close look at our present approach. A service program limited solely to the placement of workers can no longer satisfactorily deal with the problems which many of these workers face. To meet their employment needs, the farm labor service program must include supporting services of the same sort available in urban areas. This means job development, selective placement of workers needing special assistance, and referral to both farm and non-farm training opportunities. It is also imperative that counseling and testing facilities be made available to these workers. Only in this way can we properly assist them in preparing themselves to meet changing conditions of employment in rural areas.

If there were to be a comprehensive Rural Manpower Service in place of the present Farm Placement Service, it could contribute to new horizons of development of rural manpower resources. Some were mentioned by Mr. Goodwin. By being able to serve employer and worker clienteles in all rural industries, including agriculture, the service personnel would be able to help workers who wanted it, to develop local annual work programs composed of several farm jobs or a combination of farm and nonfarm jobs. As the Farm Placement Service now operates, its procedures are generally in conflict with this sort of local annual work plan development. Instead, their "annual worker plan" is an annual migratory routing scheme. It is possible, also, that employers may be interested in a group approach to hiring as in the instance of the Mexican nationals and the Puerto Ricans, in which case a rural manpower service could be especially effective because of its having organized groups with which to arrange its functioning.

A positive rural manpower attitude could even go far enough with respect to rural development to substitute for prevailing dismal assumptions that the only thing for unemployed and underemployed rural people to do is pack off to some metropolis. With the prospect of assembling an effective labor force—combined with more affirmative attitudes and actions with respect to rural location of industry—doesn't it appear realistic to believe that alternatives can be created as between city and country? Moreover, if Fuller is right (*11, pp. 16–17*) cities are becoming obsolete as the scene for handling, processing, warehousing, and transshipping of physical goods; and hence, ere long, if this nation does not do some forward thinking, it may soon be expending prodigious sums of public and private money to reverse its passively assumed solution that the rural poverty problem was to be solved by moving into the city.

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[7] Some migratory workers (adult male heads of family included) say they do not want to be tied down to a steady job, but this sometimes may be rationalization to the improbability of obtaining one. See (*5, pp. 57–58*).

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Chapter 25

Migratory Agricultural Workers in the Eastern Seaboard States

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Introduction

Migratory agricultural workers in the eastern seaboard States make up one of the three major streams of such workers in the United States. The other two are often identified as the midcontinent and the west coast streams. Migratory farmworkers are generally defined as those who change their place of abode across county lines in order to engage in seasonal farmwork. However, special situations in some work locations have resulted in a modification of this definition in some of the studies used for this report.

This report is primarily concerned with the hired workers and their family members who "follow the crops" on a seasonal basis in the 17 eastern seaboard States from Florida to Maine. It is especially concerned with the interstate seasonal agricultural workers in what has been designated as the Atlantic coast stream, extending from Florida to New York.

Comprehensive field studies involving interviews with representative samples of migratory workers, crew leaders, and employers in New York State in 1957, 1958, and 1959 are the source of much of the information on workers and their families given in this report. These studies were made by the Cornell University Agricultural Experiment Station, New York State College of Agriculture, in cooperation with the Economic Research Service (and predecessors), U.S. Department of Agriculture. Special analyses of data from records made available by New York State agencies assigned regulatory responsibilities for seasonal farm labor have provided supplemental and updated information. Use has also been made in this report of the results of other published research on migratory farmworkers and of agency and legislative reports.

Organization of the Atlantic Coast Stream of Interstate Seasonal Agricultural Workers

Workers typically move into and out of migratory farmwork during a year and from year to year. Travel from one work location to another during a year may total 2,000 miles or more. Along with bad weather, crop loss, arrival before jobs are ready, and labor utilization practices that cause loss of worktime, there tends to be an extended slack period annually between the fall harvest peaks in the Northern States and the seasonal pickup of farm labor requirements in Florida. Nevertheless, more than 10 years ago one of the competent students of farm labor in the United States wrote, "The market for migratory labor on the Atlantic coast has been organized to a greater extent than that of any other large area in the country" (*5, p. 62*).[1] The comparatively systematic movement can be explained partly in terms of geography. But, said Metzler, part of the explanation rests in "a concerted effort to get the available supply of labor to the right places at the right time" (*5, p. 55*).

The origins of this concerted effort may be traced to steps taken by the State employment services and by farm labor supervisors from the Atlantic coast State agricultural extension services during the World War II period. The fundamental principles worked out then have continued in operation. State and Federal employment services, the crew leader system, farm employers, and growers' associations have all contributed toward developing and continuing what Metzler described as comparatively "a highly efficient method of handling migratory labor" (*5, p. 61*), despite all the uncertainty connected with it.

Occupational Patterns of Interstate Migrants

Studies in New York over a 3-year period provide little support for the notion that the Atlantic coast migratory labor stream is made up largely of "professionals" who make a life career out of "following the crops" (*3*).

Heterogeneity and mobility are both characteristic of the workers in the stream at any one time. One-sixth or more, each year, were under 20 years of age. For these young workers in the migrant stream, attending school was the leading main activity during the preceding 12 months for males and females alike.

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

Up to one-fourth of the workers were females aged 20 and over; although working in crops was the leading main activity for adult women during the year preceding the studies, less than half of these women had this type of work as their main activity. Next in frequency was "keeping house," reported by at least one-fourth of the migrant women workers as their main activity over a year.

Adult males (aged 20 and over) predominated, accounting for about three out of every five workers. Among these adult males, about half had working in crops as their main activity over the 12 months preceding the studies. Some type of nonfarmwork was the main activity for about 30 percent of the adult men.

Thus, for the migrant worker group as a whole, less than half had working in crops as the main activity during the years under investigation.

A high rate of turnover among workers prevails in the Atlantic coast stream. About one-fourth of the workers in all 3 study years were in their first year in interstate seasonal work. About half had first entered the interstate stream within 3 years. Roughly 30 percent had started migrant work at least 9 years earlier. There is, as might be expected, a close relationship between age of workers and the year in which they began migratory farmwork, with larger percentages of younger than of older workers being recent entrants into the migrant stream. Among the older workers—those aged 45 and over, who made up about one-fifth of the total number—about half started their migrant work at least 9 years earlier. The information available does not indicate the proportion of these workers who continued migratory farmwork regularly during at least part of each year after first entry.

The concerted efforts to organize the Atlantic coast migratory labor stream are affected by the fact that a minority of the workers are "career" migrants and that crop work is not the main activity of the year for more than half of those who enter the interstate movement.

Place-of-Work Patterns

Information about the geographic mobility of migrants in the course of a year is offered by the New York studies. The main body of the New York migratory work force starts its yearly northward trek from Florida; this was true for 61, 72, and 70 percent, respectively, for the 3 years included. Most of the remainder winter in nearby Southern States. In this study, a "location" was defined as a stop of 1 or more days for the purpose of working or for other activity not a part of travel. Since each separate stop at a given location within a 12-month period of study was counted as a "location," the same geographical locality visited twice within the year counted as two locations. Workers might, for example, start at a "home base" in Florida and return to the same location. Although generally the locations are work locations, for some a location was to attend school, to do nonfarmwork, or to "keep house."

The workers had lived in an average of 2.5 States and in an average of 3.3 locations during the 12 months preceding interview. The averages were the same for each of the 3 years. The most frequent pattern found the migrants in three location in two States. This modal pattern generally held for both males and females and for all ages. Some migrants worked for more than one farmer at a work location.

More than half of the workers reported a two-State pattern, nearly one-third reported three States, about 10 percent reported four or more States, and not more than 2 percent had locations in five or more States.

About two out of five workers reported three locations over a year's work history. About one-fourth had two locations. About one-fifth had four locations. Five locations were reported next most frequently. Not more than 5 percent of the workers had six or more locations during a year.

The place-of-work patterns found in 1957, 1958, and 1959 for migrants working in New York State correspond closely with the patterns found earlier by Metzler in his study of migratory farmworkers based in the Belle Glade area of Florida (5, *pp. 25–27*).

Travel time and length of time away from home location

The New York workers reported an average of 5 days annually spent in travel time from one work location to another. This average held for each of the 3 years of the study, although there were some variations for different age-sex categories. The average, however, is lowered by including the first-year migrants. Travel time was undoubtedly less for those who traveled directly from their home base to New York and returned than for those who had a larger number of work locations during the year.

Adult workers aged 20 to 44, both men and women, averaged approximately 85 days in New York State annually, although there was up to 10 days' variation in this average for specific age and sex categories. For workers who had only New York and a home base location, this average would leave 275 days in nonmigrant status each year. Many workers, of course, spent more than 3 months of the year in New York. Further, there were workers who spent the greater part of the year away from their winter "home location."

More travel time and a longer length of stay away from home were reported in Metzler's Belle Glade, Fla., study made in 1953. One reason is that his sample consisted largely of workers whose winter residence was in the Belle Glade area, all of whom had done migrant work outside the area in the preceding 12 months. For these workers, crew members averaged almost 8 days in travel; noncrew members averaged less than 6 days (*5, p. 70*). The workers averaged about 200 days in Florida, compared with 155 days on the trip north. Two-thirds of the crew workers spent less than 150 days away from their home location as compared with 54 percent of the noncrew workers (*5, pp. 28–29*).

Labor Crews, Families, and Individuals as Organizational Units

The crew system plays an important part in the migratory labor movement along the Atlantic coast (*5, pp. 55–62*). A crew is defined as a group of workers headed by a crew leader (or labor contractor), who recruits the members of the crew and negotiates with employers concerning the conditions of employment. The crew leader may transport or supervise workers. He may manage a farm labor camp or operate a commissary in the camp. A crew leader may technically be the employer who hires the workers.

Typically, each spring the crew leader, in Florida or some other location in the South, reorganizes his crew or recruits a new one for the movement north in migrant status. The crew then moves location-by-location northward and back or may go to a single location and return. Crews commonly are disbanded in the fall when the work away from the home base has been completed. For those who do harvest work in the Florida winter location, jobs tend to be obtained on a day-to-day basis under the day-haul arrangement (*5, p. 17; 2, p. 6*).

Some workers in the migratory stream do not join crews, having developed their own work contacts (for some on a regular year-to-year basis) or preferring to look for their own jobs. However, only 19 percent of the workers in the New York 1957 midseason study had done no crop work under a crew leader during the preceding 12 months (*3, p. 45*). This is in general agreement with Metzler's study; he found that two-thirds of the workers who moved north from the Belle Glade area of Florida did so as members of crews (*5, pp. 27–28*). In general, the longer the distance and the larger the number of work locations, the larger the proportion of workers who moved as crew members (*5, p. 28*). Recent entrants into the migrant stream more frequently are crew members than are workers with a longer history of migratory work experience (*5, p. 19*). The New York studies show that reliance on a crew leader increases with the number of migrant workers utilized by a farmer.

Crews vary greatly in size, stability, and composition of membership. In excess of 300 labor contractors for migrant workers were registered in New York State during 1966. They anticipated crews ranging in size from 5 to 370 workers. The average crew size in the State in 1966 was reported to be 29 workers, fewer than the previous year (*7, 1966, p. 17*). Some crews are broken up into smaller work units in a given work location or at different times in a work location, depending upon arrangements made by the crew leader with individual employers. A study of 53 crew leaders in New York in 1953 showed a range of 6 to 165 crew members, with an average of 43.

Crews in the Atlantic coast stream typically add and lose members during the season. For example, of 30 persons in Florida who had led crews north, two-thirds of the members of the crews were recruited in Florida and the rest during the trip north. Two-thirds of the workers recruited in Florida stayed with the crew throughout the season, on the average. At the time of greatest size, crews averaged one-third more members than at the time of leaving Florida (*5, p. 56*). Crop and working conditions influence crew stability along with other factors such as preference and work customs of individual workers and labor pirating practices by crew leaders.

Some crews, especially small ones, may have one or more family groups as the core, possibly supplemented by single persons. Other crews may be composed entirely or largely of individuals unattached to families. The unattached individuals are predominantly men, but there are also women in this category.

Although a large number of families were represented, unattached individuals made up 50 percent or more of the workers included in the New York studies over a 3-year period. In some instances, certain members of the family unit remain at the home location while the others take part in migrant work (*5, pp. 16–17*).

Number of crews

Not all States require the registration of crew leaders. The Federal Farm Labor Contractor Registration Act, which became effective January 1, 1965, applies to persons who, for a fee, recruit or perform other specified functions for 10 or more migrant workers, excluding the contractor's immediate family, at any one time in any calendar year for interstate agricultural employment. New York, which instituted registration in 1954, requires such registration of labor contractors regardless of the number of persons involved. In 1966, 344 contractors were registered under the New York law, including less than 50 who planned to engage only in day-haul operations (*8, 1966, p. 23*).

Some picture of the extent of the crew leader system is given by the results of the annual recruitment efforts conducted each spring in Florida by the farm employment representatives of the employment services of the Atlantic Coast States. In 1966, for example, 630 crew leaders were interviewed there to fill orders placed by employers outside of Florida for workers during the season (*7, 1966, p. 18*). These crew leaders do not account for all crews originating in Florida, since some crew leaders and employers make their arrangements directly with each other; also, some crews originate in States other than Florida.

Nonworkers in the migrant stream

Some nonworkers accompany the workers in the Atlantic coast migratory stream. Some of the nonworkers are adult females, but most are children below working age, predominantly under 10.

In each of the 3 years of the New York studies, about 80 percent of all the migrants were workers, about 20 percent were nonworkers. Of the nonworkers, nearly 9 out of 10 were children under 14 years of age.

At periods of peak employment in 1959, estimates indicate that all of the major migrant-using States in the Atlantic coast stream except New Jersey had slightly higher ratios of nonworkers among domestic migrants than did New York. The 1965 estimates show that New York and these other States, with the exception of Florida, had a reduced proportion of nonworkers among the migrants at peak season. Florida, in fact, had an increase in the estimated proportion of nonworkers,[2] as well as an increase in the number of migrant workers.

Labor Camps

Away from the home location, migrants are generally housed in labor camps. It is important to recognize that labor camps, as well as crews, serve to focus the social interaction of the migrants *(1, pp. 4–8)*. The camps may provide a location for essential facilities and social services.

In New York, which requires registration and a permit for camps occupied by five or more persons including two or more workers, nearly 750 farm and food-processing labor camps were registered in 1966. These camps are generally individually owned by the farmers. In larger camps they may employ a camp manager or delegate supervisory responsibilities to the crew leader. Some crew leaders operate their own camps. In a few instances, camps are maintained by a farmers' cooperative association, by a food-processing plant, or under other arrangements.

In Florida, a variety of housing arrangements prevail, including camps administered by local public housing authorities, growers' camps, and single houses rented or owned by the workers *(5, p. 8; 2, pp. 20–23)*.

Recruitment and Placement Patterns

Employers, crew leaders, workers, and the State employment services work in a variety of combinations to recruit and place the seasonal hired farmworkers who comprise each year's Atlantic coast migratory movement.

A substantial proportion of workers are recruited and placed under the Annual Worker Plan established and operated by the Federal-State employment service system. As an important part of this procedure, farm employment representatives go to Florida each spring and conduct pooled interviews with crew leaders in an attempt to fill orders from farmers for workers and to help crew leaders piece out regular employment over the season for their crews. In advance of the Florida recruitment itinerary, employers of seasonal farm labor who wish to place orders for workers provide information as to number of workers needed, employment periods, and conditions of employment. The farmers may designate the crew leader they want. The Florida State Employment Service notifies predesignated crew leaders and others who might be available as to the times and places where the employment representatives are to conduct interviews.

In 1966, for example, representatives from 17 States took part in the interviews. They went to Florida in April with orders from 1,599 employers. Interviews were conducted with 630 crew leaders representing about 31,000 workers. In this process, New York State representatives committed 177 crew leaders with over 8,000 workers to jobs in New York State *(7, p. 18)*. New York representatives went to Delaware, Maryland, Virginia, and North Carolina in early July 1965, to interview crew leaders with commitments in New York later in the season and to locate additional crews to fill work orders. Representatives from other States went to New York to do additional recruiting for the harvest of fall crops. At times, the State employment services may extend recruiting activity to States not defined as within the Atlantic coast stream.

A second pattern is voluntary return of crews, families, and individuals to the same employer by prearrangement. A third pattern is direct recruitment by a farmer. Finally, there are the "freewheelers" or "drifters," mostly unattached individuals, who find a job as they can.

To meet their commitments, crew leaders recruit workers in a variety of ways. Some crews have a stable membership or a core membership from year to year. Most expect turnover. Some leaders, especially leaders of large crews, recruit part or all of their crew through State employment offices. For others, especially leaders of smaller crews, personal contact plays an important part, with new workers recruited from friends and neighbors, through relatives, from fellow workers in the winter location, and through former crew members. Some crew leaders report they get all their workers from people who voluntarily come to them *(3, p. 52)*. Some pick up workers by "going up and down the street" or from those who are "waiting on the corner." Workers dropping out en route or at northern locations may be replaced by "freewheelers" or "drifters," or a crew leader may have to return to a labor surplus area to recruit additional workers.

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[2] Based on data given in *(14)*. Estimates of nonworkers developed in 1959 for a normal season were made by the U.S. Public Health Service; estimates for 1965 were made by the U.S. Department of Labor *(14)*. These estimates apply to all domestic migrants, both interstate and intrastate, and include migrants from Puerto Rico. The information given above from the New York studies excludes Puerto Ricans. Also, the New York studies include some workers employed in food processing.

Just as a farmer cooperative may operate a farm labor camp, in a few instances a cooperative serves as the intermediary in recruiting workers for the members. Likewise, food-processing companies do recruiting of workers who may be used in field operations.

Transportation

Migrants do most of their long distance travel by truck, bus, or automobile. In a study of 45 crew leaders in New York in 1959, about two-thirds transported their workers from location to location. A larger percentage of the crew leaders, 82 percent, were found in the New York study to transport workers between camps and fields.

Practices vary as to whether worker, employer, or crew leader pays for transportation costs to get to the work location and to return to the home base or another work location.

Federal and State Laws Relating to the Organization of the Atlantic Coast Stream

The organization of the Atlantic coast migratory labor stream has increasingly been under the influence of Federal and State regulatory measures, in addition to being affected by Federal and State programs designed to serve migrants, crew leaders, or employers. It is not the purpose of this report to analyze the impact of such Federal and State laws or even to identify all such legislation.

Federal legislation pertaining to crew leader registration, importation of foreign nationals for agricultural employment, minimum wages for agricultural workers, standards for interstate carriers of migrant workers by motor vehicle, employment of children in agriculture, and other measures applies uniformly, although its impact may vary among the States.

At the State level, however, legislation pertaining to migrants varies greatly. Likewise, States vary as to when regulatory and other measures were first put into effect. These State laws have a bearing on the organization of the interstate movement. For example, recruitment in Florida and the timing of the outmovement from that State have been subject to an "emigrant agent" law pertaining to hiring laborers, or soliciting emigrants, to be employed beyond the limits of the State.[3]

In New York, crew leaders have to be registered before their services can be used by a farmer; farmers who use workers provided by a crew leader have to be registered; farmers who do not use a crew leader's service but themselves bring five or more out-of-State workers into the State have to be registered in advance; and camps housing five or more migrants are required to have a permit to indicate compliance with established regulations of the State Sanitary Code (9). These examples of State laws are illustrative. As such regulatory measures are introduced and enforced, they enter into the decision-making of employers, crew leaders, camp operators, and migrant workers about their future.

Economic and Social Characteristics and Conditions of People in the Atlantic Coast Stream

The information in preceding sections has indicated that there are many elements of change in the migratory farmworker situation in the Atlantic coast and other eastern seaboard States. Information about the current economic and social characteristics and conditions of the migrant workers and their families in these States, however, is incomplete. Much of the descriptive information which follows is based on statewide studies made in New York State in 1957, 1958, and 1959. This information is updated, as far as possible, from available research studies and public agency data and reports.

The New York Studies

In 1957 the Department of Rural Sociology at Cornell University initiated a 3-year statewide study of migratory farmworkers in New York State in cooperation with what was then the Farm Economics Research Division, Agricultural Research Service, U.S. Department of Agriculture (*3*, *12*, *13* and *16*). Building upon a more restricted study made in the State in 1953 (*6*) the 1957 study was intended to—

(1) Determine the trends in employment and occupational backgrounds of migratory farmworkers in New York State, including types and duration of work and migration practices;

(2) Determine earnings of the workers from farmwork and nonfarmwork during a 12-month period;

(3) Describe individual and family characteristics, use of health and educational resources, school attendance of children, and workers' opinions about New York State as a place to work and live;

(4) Ascertain the extent of social security coverage of migratory workers, and their understanding of the benefits of the program;

(5) On an exploratory basis, determine the processes through which persons enter and leave the migratory farm labor force; and

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[3] Florida statute 205.39, entitled "Emigrant or Labor Agents," contains the following provisions:

(1) A license is required from the county tax collector of each county from which emigrants are to be solicited;

(2) An emigrant agent is "any person, firm or corporation engaged in hiring laborers or soliciting emigrants in this State, to be employed beyond the limits of this State." Exemptions include Federal and State employment agencies placing laborers in jobs outside the State;

(3) License fee—$1,000 for use of the State, $500 for use of the county; fees to be paid to the county tax collector (the license is valid only in the county where purchased);

(4) Penalty—a misdemeanor, with fine of $500 to $5,000 or imprisonment 6 months to 2 years for each offense.

(6) On an exploratory basis, determine current and prospective farm labor problems as (a) viewed by employers and workers, and (b) indicated by technological and management changes by farmers.

In the following 2 years, the emphasis was on determining the year-to-year stability or change in the composition, employment, and earnings of migratory farmworkers. Crew leaders, housing in labor camps, supervision and management of workers, and the impact of technology were among the topics also covered.

Surveys of workers and their families were made in August and September, at or near the seasonal peak for the migrant population in those years. To obtain a representative picture, the workers interviewed were drawn randomly within camps from random samples of migrant farm labor camps.[4] This procedure resulted in information for workers and nonworkers distributed among camps and counties within New York as follows:

Year	*Counties*	*Camps*	*Workers*	*Nonworkers*
1957	18	52	942	244
1958	24	76	805	205
1959	22	73	511	112

The sample camps represented the wide range of situations among migrant labor camps within the State. Size varied from the minimum for which a permit is required up to some of the largest camps in the State. Ownership and management included individual growers, corporations, cooperatives, and labor contractors. Some were occupied by family groups, others only by males. Most were camps housing only Negroes, but in some there were Puerto Ricans, Jamaicans, Bahamians, or native whites. In a few camps, migrants were a minority among year-round residents who had formerly been part of the migratory labor stream.

The 1957 and 1958 interviews were limited to Negro migrants, but in 1959 all migratory workers living in registered farm labor camps were sampled. Puerto Ricans made up 15 percent of the sample migrants in 1959, and another 4 percent was composed of native whites, Bahamians, Jamaicans, and American Indians. Only the information on Negro migrants is reported here from the 1959 study, for comparability. A few of the migrant workers interviewed had been employed solely in food processing during the 12 months preceding the interview.

Composition

Age, sex, and worker status

About 80 percent of the migrants were workers. Around 70 percent of all workers were male. Nearly two-thirds of the migrant workers studied were aged 20 to 44. Children under 14 made up less than one-fifth of the Negro migrant population.

Unquestionably, the Atlantic coast migratory movement at its usual northern terminus is highly selective when its Negro participants are compared with the nonwhite population of the nation. The movement selects out a larger proportion of workers, and more of the workers are males. More of the migrants and migrant workers are in the youth group (aged 14 to 19) and in the highly productive age group 20 to 44 years. Fewer of the migrants are children under 14 or adults aged 45 and over (table 1).

TABLE 1.—*Age and sex composition of all Negro migrants and of those 14 years of age and over classified as workers, New York, 1959, compared with age and sex composition of the United States nonwhite population and labor force*

[Data in percent]

Age group and sex	New York Negro migrants	U.S. nonwhite population, 1960 census [1]	New York Negro migrant workers 14 years old and over	U.S. nonwhite civilian labor force 14 years old and over, 1959 [2]
Under 14	18	35	.....	.....
14 to 19	15	10	17	8
20 to 44	52	32	64	59
45+	15	23	19	33
Total	100	100	100	100
Male	64	49	70	61
Female	36	51	30	39
Total	100	100	100	100

[1] Data from *U.S. Census of Population: 1960*. Vol. I, Pt. 1.

[2] Computed from data in *Manpower Report of the President, 1965*, table A-3.

Family groups and unattached workers

Family units, normal and broken, with and without children, take part in the migrant movement. Nevertheless, at least half of the workers were classified as unattached individuals; that is, they were not related to other persons in the living unit in which they resided or they were not a part of a household group that had traveled as a unit during the 12 months preceding interview. Unattached workers were predominantly male. Among female workers, over half had a spouse in camp. Matricentric units were found, as in other studies of Negro migratory households (*5, pp. 10–11; 2, pp. 17–18*) (table 2).

The data on family groups are subject to some limitations. As a practical necessity, a household

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[4] For a general description of the procedures followed in drawing samples used in the studies, see Larson and Sharp (*8, pp.* [illegible]).

TABLE 2.—*Family status by worker status and sex: New York, 1959*
[Data in percent]

Family status	All persons	Workers			Non-workers
		Total	Male	Female	
Unattached	41	50	62	19	1
Person with spouse in camp	31	36	27	57	8
Head of family without spouse in camp	4	6	4	11	.....
Child or married to child of head	20	4	4	5	87
Parent or other relative of head	4	4	3	8	4
Total	100	100	100	100	100
Number reporting	506	409	286	123	97

was defined as all the persons living in a dwelling unit, regardless of kinship relationships. A dwelling unit was most often a single room in a barracks or in a building converted from other uses. The "household" was frequently not synonymous with the conventional "family" unit for a variety of reasons. For instance, unrelated workers might be assigned the same space in a barracks. Because of the physical layout of living quarters, occasionally different members of a primary family unit might be located in different households within the same camp. Further, while some members of the family were in the migrant stream, others, especially children, might have been left in the "home" location.

Premigratory occupation of workers

The New York studies provide a classification of migrant workers on the basis of their major activity during the 12 months preceding their entry into migrant work. Unfortunately, the information covers only that 12-month period and so does not provide information on the migrants' total work experience.

It is generally supposed that a majority of the Atlantic coast migrants are in the stream because they represent a surplus labor force from farms and rural communities throughout the Southeast. It is believed that many have been displaced from their former status as farm wage workers or sharecroppers as a result of such factors as mechanization and farm consolidation. If such a portrayal is correct, the transition to migrant farmworkers does not, typically, occur in a single move. It seems more likely that the modal pattern is one of entering the migrant stream after an intervening period.

Male workers 20 years of age and over showed a similar occupational pattern for the premigratory year for each of the 3 study years. About half of these adult males had some type of nonfarmwork as the main activity during the year before first entering the migrant stream. About one-third had been in some type of farmwork, usually as a wageworker. The main activity for the premigratory year for these adult males is illustrated by the following data from the 1959 study:

Main activity in year preceding first migratory work	*Percent*
Farmwork	36
Owner operator	3
Tenant	1
Sharecropper	2
Wagework	30
Unpaid family work	([1])
Nonfarmwork	49
Looking for work	1
Attending school	7
Other	7
Total	100

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[1] Less than 0.5 percent.

Among both male and female migrant workers under 20, attending school was the main activity for the majority during the premigratory year; the percentages were lower for males than for females. Between one-fourth and one-third of the adult female workers had some type of farmwork, usually wagework, as the main activity during the premigratory year. The year-to-year pattern for other activities was less stable, however, for the adult females than for the other categories of workers. For 2 of the 3 years, the adult women who had been doing farmwork were outnumbered by those who had been doing some type of nonfarmwork.

Metzler, in his study of migrants in the Belle Glade area of Florida, found the year in which most workers started doing migratory farmwork was significantly more recent than the year they moved to Florida. Apparently the pattern was to move to Florida and ordinarily to work there 3 or 4 years before entering the migratory stream (*5, pp. 1 and 19–23*). The New York studies showed that the percentage of migrant workers who had spent the previous winter in Florida was far larger than the percentage born in Florida. In fact, more workers had been born in Georgia than in Florida. But for nonworkers, mostly children, Florida was the leading State of birth. Thus the New York data give support to the pattern found by Metzler.

Recent changes in composition

The number of migrant farmworkers in New York and in the Atlantic coast stream has decreased since the studies made in 1957–59. On the demand side, mechanization of farm operations has reduced the aggregate need for seasonal hand labor in the State. The decrease in the number of interstate workers in New York is also attributed to such factors as improved employment opportunities in their home areas, the increase in laws and regulations affecting farm labor contractors, the competition from other areas for workers, and the effects in New York of programs available to workers through the Economic Opportunity Act (*7, 1965, p. 5*).

The judgment of the Farm Employment Office of the New York State Employment Service (*7, 1965, p. 8*) at the close of the 1965 season was—

> Farm labor crews, whether local or interstate, are becoming predominantly male, a large portion being young single men under 21, others in the 45 to 65 age bracket. The family-type, stable crew of the past is seldom available.

Employment

Main activity

Less than half of the workers in the New York studies of migrants had working in crops as the main activity of the 12 months preceding interview. Age and sex of the workers strongly influenced the main activity. Differences between men and women were centered in the housekeeping category. Differences related to age centered around school attendance, as illustrated by the data for 1959 in table 3.

TABLE 3.—*Main activity of migrant workers during 12 months preceding interview, by sex and age, New York, 1959*

[Data in percent]

Main activity	Total	Male		Female	
		Under 20	20 and over	Under 20	20 and over
Working in crops	47	27	53	18	49
Other farmwork	6	2	11		
Nonfarmwork and domestic work	22	22	26	4	17
Keeping house	7			9	25
Attending school	9	39	1	65	1
Ill, not working	7	4	8	4	8
Other	2	6	1		
Total	100	100	100	100	100
Number reporting	402	51	229	23	99

Days worked for wages

Little is to be gained by talking about the average number of days of annual employment for migrant farmworkers in view of the way in which employment patterns vary between male and female migrants and among age groups. In each age group, males have substantially more days of wagework each year than do females. Men aged 20 and over have more work for wages than do younger males. Among females, the average number of days worked generally increases for each successive age group, with the women aged 45 and over averaging the most work per year.

When crop work alone is considered, the adult women and the adult men do not differ greatly in the average number of days they worked for wages (table 11 in the appendix). A necessary precaution to note is that these figures refer to days on which any wagework was done, regardless of the number of hours worked.

The New York studies showed that the most fully employed—the adult males—averaged 209 days of work for wages during the 12 months preceding interview in 1959, averaged 211 days preceding the 1958 interviews, and averaged 219 days preceding the 1957 interviews. In the 1959 study, farmwork of all types for wages averaged 154 days, of which 115 days represented work in crops. The balance of 55 days worked for wages was in nonfarmwork.

That crop work accounts for relatively more of the year's wagework for adult women migrant workers than for adult men is shown by table 4, from the 1959 study.

The most fully employed age-sex category among the migrant workers studied over the 3-year period was the group of males aged 25 to 34, who averaged 234 days of wagework in the year prior to their interview in 1957. The highest average number of days of crop work was for males aged 45 and over; these men reported 132 days of such wagework in the 1958 and 1959 studies.

Unemployment

Three major types of reasons are given by migrants for not working. One reason is lack of jobs although the workers are available for work. They may be unemployed when in the migrant stream for reasons such as bad weather, crop loss, slack season

TABLE 4.—*Average number of days worked for wages by male and female migrant workers 20 years old and over, during 12 months preceding interview in New York in 1959, by type of work*

Type of work	Average number of days[1]	
	Male workers	Female workers
Total	209	162
Total farmwork	154	121
In crops	115	103
General farmwork	20	2
Food processing	19	16
Nonfarmwork	55	41

[1] Days on which any work for wages was done.

TABLE 5.—*Average number of days not worked for wages by adult male and female migrant workers 20 years old and over during 12 months preceding interview in New York in 1959, exclusive of travel time, by reasons for not working*

Reason for not working	Average days not worked	
	Male workers	Female workers
Total, all reasons	151	198
Arrived early or slack season	52	42
Crop loss or bad weather	17	15
Regular days off or holidays	56	48
Resting or on vacation	11	16
Ill or unable to work	6	10
Keeping house		64
In school	2	2
Other reasons[1]	7	1

[1] Includes employment such as in nonwage farmwork and farming for self.

between harvests, or arriving early at a work location; or they may find available jobs are filled. Second, they may be not working because of voluntary absence or established custom; included here are regular days off, holidays, and resting and vacation days. Third are the personal reasons, such as illness or inability to work, and activities outside the hired wage status, such as housekeeping, school attendance, and nonwagework.

The amount of time not working for wages, and the reasons, are associated with the age and sex of the worker.

Days not worked for wages

For each age group, females average more days not worked for wages than do males (table 12 in the appendix). The time spent by women in keeping house is the most important reason for the difference. Youthful workers, under 20, report more days not worked than do adults. School attendance by youth is the major factor in the difference. Women aged 45 and over have substantially more loss of time because of illness than do other workers. The use of a year's time by the average adult migrant worker is illustrated for 1 year by the figures in table 5.

Days unemployed

The slack period between harvests, bad weather, and crop loss are hazards to the full employment of workers while in migrant status. Persons who enter the migrant stream are also believed to be among the most disadvantaged members of the labor force with respect to nonfarm employment and to be especially liable to bear the brunt of fluctuations in general employment levels.

Adult males interviewed in 1957 reported an average of 50 days of unemployment during the preceding 12 months—time when they did not work for wages because of slack seasons and similar external conditions. The average rose to 75 days in 1958 and was 69 days in 1959. For adult female workers the corresponding days of unemployment were 51, 70, and 67. The impact on migrant workers of a recession and of a winter freeze in Florida is reflected in these figures.

The possibilities for improving the use of labor may be emphasized by examining the most fully employed group in any of the studies, males aged 25 to 34, in the 1957 study, who reported work or travel in connection with work for all but 126 days during the preceding 12 months. Of this time, 43 days were not worked because of crop loss, bad weather, arriving in a location before work was available, crop jobs filled, or slack season between harvests. Thus, from the standpoint of this group, it may be inferred that they considered themselves available for work and unemployed about 8 workweeks during the year.

The slack season in late fall and early winter before the seasonal pickup in employment in Florida is an important consideration in the unemployment of migrant workers in the Atlantic coast stream.

Wages and Earnings

Wage rates for workers in the Atlantic coast migratory farm labor stream cannot be described simply. The workers perform many kinds of farm operations; they also do nonfarmwork. Wage rates vary greatly by activity. The rates may also vary by location and during the season within a location. Because of this complexity, discussion is limited here to illustrating a few aspects of farm wage rates.

Hourly wage rates for farmwork

Although piecework is an important basis of payment for work done by migrants in crops, especially in harvest operations, some work is done on an hourly or other time basis. Mechanization of harvest operations is accompanied by a shift away from piece rates.

Past studies by the U.S. Department of Agriculture have delineated area variations in the wages of agricultural labor in the United States (*4*). The persistence of "farm wage belts" in the Atlantic coast area is indicated by the USDA figures for all types of hired farmworkers employed on an hourly basis (without board or room). Among the major migrant-using States on the Atlantic coast, New Jersey and New York had the highest average rates in 1959 (table 6). The Florida average was considerably higher than that of the other Southeastern States. The rates have since increased nearly every year in each of the States. By 1966, the average hourly rates ranged from $0.74 in South Carolina to $1.41 in New Jersey. The spread between the average rates paid hourly farm labor in the two major migrant-using States, New York and Florida, was reduced from 34 cents in 1959 to 25 cents in 1966. The spread in hourly rates between the highest-paying and lowest-paying States was, however, 65 cents in 1959 and 67 cents 7 years later.

TABLE 6.—*Annual average farm wage rates per hour without board or room, 1959 and 1966; and change in average hourly rates 1959–66, Atlantic Coast States*

State	1959	1966	Change 1959–66
New Jersey	$1.15	$1.41	$0.26
New York	1.12	1.32	.20
Pennsylvania	1.04	1.23	.19
Delaware	1.04	1.21	.17
Maryland	1.01	1.20	.19
Virginia	.79	1.00	.21
Florida	.78	1.07	.29
West Virginia	.75	.94	.19
North Carolina	.70	.95	.25
Georgia	.63	.88	.25
South Carolina	.50	74	.24
United States	.95	1.23	.28

Source: *Farm Labor*, various issues.

Hourly wage rates for migratory workers

It was indicated previously that many migrants do work paid on an hourly or other time basis in addition to doing work paid on a piece basis. Do the hourly rates paid migrants compare favorably with the rates paid all categories of hourly farmworkers?

The average rates reported for work done on an hourly basis by the migratory workers included in the New York 1959 study were higher than the average rate paid in several Atlantic Coast States to hourly farmworkers of all categories. The migrant males reported an average of 88 cents an hour received for all crop work done on an hourly basis during the 12 months preceding interview; for general farmwork the average reported was 92 cents per hour. They were paid an average of $1.02 per hour for work done in food processing. The economic appeal of nonfarmwork is indicated by the fact that they reported receiving an average of $1.22 per hour for such work.

The average hourly rate reported by these same male migrants for work done in crops in Florida was 85 cents; this may be compared with the 78-cent average paid in Florida in 1959 for all types of farmwork paid by the hour. In New York the averages were 93 cents for crop work done by migrant men and $1.12 for all types of farmwork paid by the hour. Thus a New York-Florida differential of only 8 cents was reported for crop work done by migrants on an hourly basis as compared with a 34-cent difference in the rate for all types of farmwork paid by the hour.

Piecework rates

Metzler concluded in his 1953 study that piecework "wage rates for a particular crop activity were fairly uniform from New York to Florida, indicating the existence of a single labor market" (*5, p. 2*). He found variations were apparently as great in any one locality as in the Atlantic coast area generally. At that time, it appeared that competition for migrant labor had caused farmers to move toward the same level of wage offerings, the possible exception being States not depending much on workers from the Atlantic coast stream.

The New York studies and the U.S. Department of Labor wage rate surveys through 1966 likewise show considerable variation in piecework rates for a given crop activity within a State or locality. The wage rate survey data suggests an upward trend in piecework and hourly rates for the crop work activities engaged in by migrants. The continued use of a great variety of units of measure for a single activity, such as picking apples or snap beans, makes it difficult, however, to give from the available data a satisfactory summary measure of piece rates for many of the fruits and vegetables harvested. Comparisons over time are also handicapped where the advent of mechanization leads to much of the remaining work being paid for on a time rather than a piecework basis. Mechanization may also change the skill required, and the more highly skilled workers receive higher compensation.

Annual and daily earnings for wagework

The amount of average annual earnings of the migrant workers in the New York studies was found to be closely linked with the age and sex of the workers and, in general, followed the pattern observed in regard to the average number of days worked for wages. Differences between age-sex groups were more pronounced, however, since the groups who averaged less work also averaged smaller earnings per day worked.

Males earned about twice as much as females from wagework annually; in each age group, the men also had greater average daily earnings. These findings are illustrated by the results of the 1959 study given in table 13 in the appendix.

Adult males, the most fully employed category, had wage earnings which averaged $1,525 for the 12 months preceding interview in 1957. The comparable averages were $1,626 and $1,559 for 1958 and 1959, respectively. The average daily earnings for days in wagework were $6.98, $7.70, and $7.43, respectively, for the adult men.

The highest annual wage earnings for any age-sex category among the workers studied over the 3-year period was for the group of males aged 25 to 34, who averaged $1,723 from wages for the year prior to their interview in 1957. Among females, the highest annual wage earnings were reported by women aged 45 and over included in the 1959 study; they reported an average of $927.

These averages include all types of wagework, farm and nonfarm; they are not limited to crop work. Only cash wages were reported.

The wages earned in New York amounted to 25 percent of the total wages earned annually by adult males and amounted to one-third of the total wages earned each year by adult females. Although not a complete accounting of the amount earned while in migrant status away from the home location, these figures for earnings in New York suggest that migrant work contributed a substantial share of the total wage income received yearly by those in the Atlantic coast movement.

Annual income

Cash income reported from sources other than wages was limited for these migrant workers. The average amount did not exceed $50 for adult men or $40 for adult women in any of the years under study. Thus the annual cash incomes were only slightly larger than the earnings from wages, as illustrated by the data for 1959 in table 13 in the appendix.

A family with two "average" adult workers aged 25 to 34, one male and one female, would have had about $2,640 cash income from all sources during the year preceding interview in 1959. The income actually received by a family would vary from this hypothetical case depending on the number of workers, the number of days worked, the type of work done, the locations at which work was done, and the wage rates.

One may estimate that a comparable pair would have about $3,500 cash income in 1966, given several assumptions for the hypothetical case: (1) that the wagework was all in Florida and New York, with the same proportion of earnings in the two locations in both 1959 and 1966; (2) that wage rates for work done by the migrants in the two locations increased as rapidly as the average farm wage rate per hour without room and board; and (3) that the same amount and type of work was done in both years. A change in any of these assumptions would change the estimated cash income for 1966.

Farm Labor Camps and Housing

Housing for workers and their accompanying family members in the Atlantic coast migratory stream is generally provided in some residential arrangement termed a labor camp. Most of the States using migrant farmworkers have mandatory codes, by law or regulation, which apply to these camps. These codes, as of 1962, were summarized in a publication of the U.S. Department of Labor (*15*). States vary, however, as to the maximum number of occupants which makes a dwelling unit subject to their code. The code provisions for farm labor camps likewise vary among the Atlantic Coast States. In some instances, migrant labor camps are subject to county housing or zoning regulations.

The variations in State and local regulations and variations in enforcing the codes contribute to the variations in quality of housing available to migrants. Too, employers differ in the importance they attach to housing as a factor in recruiting and holding workers. The fact that typically the housing is needed for only a few months, or even a few weeks, of the year enters into the economics of providing acceptable housing. The attitudes and practices of the camp occupants and the camp operators have also been observed to enter into the quality of housing.

All of these factors make housing for migrants a topic about which there are diverse and sometimes emphatic opinions. Workers do not agree among themselves as to which States offer the best or poorest housing. It appears that their views reflect particular experiences, good or bad, in specific work locations. Further, in none of the New York studies was housing the leading topic of complaint by workers. Rather, the most frequent complaints centered on income factors such as the amount of work available or the wages paid.

The rest of this discussion about farm labor camps applies only to New York, one of the major users of migrants and a State which has increasingly raised its standards for such camps. An annual permit is required for a farm labor camp occupied by five or more persons if at least two of them are workers.

The number of camps registered with the New York State Department of Health in 1966 was about 750. The number had been reduced by one-third since 1959. The aggregate capacity of the camps in 1966 was at least 23,000 persons, a decrease in capacity of over 40 percent since 1959. Some camps house only unattached males, reflecting the composition of the migrant work force employed. Others house only family groups, and some house both.

The median rated capacity per registered camp in 1966 was 20 persons; the mean was 32 persons. Large camps are the exception, as shown by the following distribution of camps in 1966 according to their rated capacity:

Rated capacity	*Percent of total camps*
5 to 24 persons	59
25 to 74 persons	31
75 persons or more	10
Total	100

A few camps associated with packing and food-processing operations operate the year around. Nearly one-half the camps in 1966 were expected to be open less than 4 months, however, and only a small minority were to operate for more than half the year. The distribution of camps in 1966 by expected duration of operation was as follows:

Duration of operation	*Percent of total camps*
Less than 4 months	49
4 or 5 months	33
6 to 11 months	12
Year around	6
Total	100

As compared with 1959, there has been an increase in the proportion of camps which operate less than 4 months or, at the other extreme, which stay open the year around.

In 1966, when about 300 migrant labor contractors were registered with the New York State Department of Labor, about two-thirds indicated they would also operate a farm labor camp. Over 300 growers and processors were registered that same year as bringing five or more seasonal farm or food-processing workers into the State, without utilizing the services of a labor contractor. Practically all of these growers or processors planned to operate a farm labor camp, according to their registration certificates. Some contractors and some growers operate more than one camp.

A commissary is one of the facilities most frequently found in these camps. Permits were issued in 1966 for nearly 300. The majority of crew-leader-operated camps were issued commissary permits, but few grower-operated camps had such a facility.

This report does not attempt a complete inventory of facilities available in farm labor camps, nor does it evaluate the quality of the camps. While larger camps have an advantage as a location for such services as migrant child care programs and summer schools for children of migrants, workers housed in smaller camps were less likely to express dissatisfaction about housing than those in larger camps, according to the New York studies.

Education

To illustrate the formal education of persons in the Atlantic coast migratory labor stream, data from two studies made in New York in 1957 are used (*12*).

Education of children aged 7 to 15

Since the age group 7 to 15 is one for which school attendance is usually compulsory, it was selected for analysis in regard to the ability of the migrant children to maintain the usual standards of progress in their school work. School attendance was found to be almost universal for children of this age range. Of the June 1957 survey group, 73 percent had last attended school during that month; the balance of 27 percent had last attended school during May. Of the midseason group, 78 percent were attending school at the time of the survey or had last attended in June, and 19 percent had last attended during May; only 3 percent had last been in school before May.

The schooling of most children who accompanied family members in the migratory movement was interrupted during the year by family migration. Forty percent of the children in the 1957 studies attended school in only one State during the 12 months preceding interview. Nearly all the remainder attended school in only two States. But 2 percent had attended in as many as three States during the preceding 12 months. Schools attended were predominantly in Florida and New York.

None out of every 10 children (89 percent) traveled with the family all the time they followed the crops between September 1, 1956, and the time of the 1957 survey. About 5 percent of the children either remained in the home locality after their parents left or returned early in the fall to avoid loss of schooltime. It seems probable that in other cases the movement of either the entire family or the mother is scheduled so as not to interfere with the schooling of the children.

The accepted standard in American society is the completion of one school grade per year from the age of 6 until the pupil leaves school. The present report utilizes an index of retardation which is defined as the difference between this expected progress and the average progress actually achieved. For example, a child 9 years old is expected to have completed three school grades. The difference between the expected three grades and the average grade completed by 9-year-olds will give the index of retardation for students of this age group.

It should be noted that most States permit children to enroll in school before the age of 6 if their birthdays fall before a specified date. The present index does not allow for such early enrollments, and so, to the extent that they occur among migrant children, the actual retardation of the group tends to be understated.

Table 7 presents the average progress and the index of retardation for children included in the 1957 surveys. These statistics show that the migrant children less than 11 years old approached the expected performance standards. The retardation was quite rapid, however, from the 11th year onward, with 15-year-olds averaging more than 2 years below the standard.

TABLE 7.—*Average grade of school completed and retardation by age of migrant children, New York, 1957*

Age of children	Number reporting	Average grade completed	Average retar-dation [1]
7	28	0.8	0.3
8	19	1.9	.2
9	29	3.0	.1
10	23	3.8	.3
11	23	4.4	.7
12	21	4.8	1.3
13	22	6.4	.7
14	33	6.5	1.6
15	30	6.7	2.4

[1] To compensate for different survey dates, children for whom information was obtained in the June survey were "aged" 73 days, or from the midpoint of the June survey period to the midpoint of the midseason survey period. Since this is one-fifth of a year, approximately one-fifth of the children in the June sample would have reached another birthday by the middle of the midseason survey period. Thus they would be expected to have completed one-fifth more grades of school. This results in estimates based on ages as of September 3 for all children.

The foregoing figures are based on averages and therefore include students ahead of as well as behind their respective age-grades. Approximately 21 percent of the 7- to 9-year-old children were ahead of their expected grades, while only 28 percent of this group were retarded. Of the 13- to 15-year-old children, 73 percent were retarded and nearly half were retarded 2 or more years. This retardation rate was at least double that of the nonwhite population of the same age in the United States as a whole.

For the children who attended New York schools, the predominant pattern was one in which a relatively small number attended just before the closing of school and a much larger number attended during the early part of the school year in the fall. However, the major part of school attendance for most of the children studied was outside of New York State.

A substantial proportion of the school-age children in the migrant population who did not attend New York schools did not attend because they arrived in the State after completing the school year in Florida and after schools were closed in the New York communities to which they came. In addition, they may have returned to their home bases before the beginning of the New York school year in the fall.

New York State started summer schools for children of migrant workers on a pilot basis in 1956. The program grew steadily until 1965, when funds made available under the Economic Opportunity Act permitted more rapid expansion. In 1966 the summer program was conducted in 28 centers, with an enrollment totaling over 2,300 children of migrants and other seasonally employed agricultural workers *(8, 1966, pp. 7–12)*.

Education of youth aged 16 to 24

An especially valuable index of the extent to which a population is being educated is the proportion of 16- and 17-year-olds enrolled in school. Since the migrants were interviewed during the summer months when no children were enrolled in school, as a substitute, the listing of school attendance as the major activity of an individual during the 12 months preceding the interview was used as the equivalent of school enrollment. Major activity was defined so that the school category included all those who devoted more time to school than to an occupation or any other activity. This is not identical to, but should approximate, school enrollment.

Among the 16- and 17-year-olds in the 1957 surveys, attending school was the "major activity" of the preceding year for 44 percent.[5] In comparison, 78 percent of the 16- to 17-year age group of the nation as a whole were enrolled in school in October 1956.

The highest school grade completed by migrant youth is shown in table 8. Although few youths who are now migrant workers have completed high school, about 44 percent of those aged 20 to 24 have had some high school training, and for the younger group, aged 16 to 19, two of every three have had some work in high school.

TABLE 8.—*Highest grade of school completed by migrant youths aged 16 to 24, New York, 1957*

Highest grade completed	Age group 16–19	Age group 20–24
	Percent	
0 to 4	4.2	11.5
5 to 7	23.6	30.0
8	12.5	14.3
9 to 11	50.5	31.8
12	6.9	9.1
13 or more	2.3	3.3
Total	100.0	100.0
Number reporting	216	210
Median grade completed	9.5	8.6
Males	9.3	8.3
Females	9.7	9.6

The median grade completed for those aged 20 to 24 was 2 years less than that for the nonwhite population of the United States as a whole in the same age group. However, between the 1953 and 1957 surveys, the median grade completion for the 16- to 24-year-old group as a whole rose 1.2 years.

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[5] A special problem occurred in the interpretation of data from the June 1957 survey. One camp in the sample for this survey employed a group of pupils from a southern high school who worked under the chaperonage of their teachers. This introduced a major bias both in regard to the number of 16- and 17-year-old migrants in the sample and, since school enrollment was a qualification for employment, in regard to the number of this age group who were enrolled in school. For this reason, residents of this camp were omitted from the sample in computing the percentage of 16- and 17-year-old students enrolled in school.

The New York surveys show that females quite consistently have a higher median grade completion than males.

School achievement of migrants 25 years of age or older

The median school grade completed for all migrants aged 25 and over was 6.4 for the 1957 surveys. Census data for 1950 showed medians of 5.8 grades for the nonwhite population of Florida and 5.9 grades for the nonwhite adult population of the South Atlantic region of the United States. All three of these medians were well below the 8.6 grades reported by the 1950 census for the nonwhite population of New York. Because the dates of the census and the survey data are not the same, and differences in age and sex composition are not standardized, a precise comparison cannot be made.

Younger migrants are much better educated than older ones. The median grade of school completed drops steadily with each older age group, and goes to the low of 3.8 years for those aged 55 years and older. In 1957, the 20 to 24 age group, nearly all of whom were through attending school, had a median 4.8 grades higher than the oldest group (tables 8 and 9).

TABLE 9.—*Highest grade of school completed by migrants aged 25 and older, by age groups, New York, 1957*

Highest grade completed	Age group			
	25–34	35–44	45–54	55 and over
Percentage of migrants completing grades—				
0 to 4	21.5	37.4	53.0	60.7
5 to 7	33.6	27.1	26.9	27.0
8	12.4	12.6	12.4	7.9
9 to 11	24.6	16.6	12.4	3.3
12	7.0	4.7	3.6	1.1
13 or more	.9	1.6	1.0	.....
Total	100.0	100.0	100.0	100.0
Number reporting	330	254	194	89
Median grade completed	7.6	6.6	4.8	3.8

The migrant population is at a considerable disadvantage in regard to the education of its children. At the same time, the general pattern of school attendance and achievement is much like that of American society as a whole, except at a lower level. There is evidence that persons who enter the migrant stream are sharing in the increase in formal education that is taking place in the United States.

Health and Use of Health and Medical Care Facilities

Without special measures, through personal effort or public programs, the migratory farm labor population would be expected to make less use of health and medical care facilities and to less frequently follow preventive health practices than a cross-section of the nonmigrant population of comparable age and sex.

Change of locations during the year and difficulties in getting easily from farm labor camps to health and medical care facilities situated in town and city centers serve as barriers to high rates of use of important health resources. Further, the migrant characteristics of low income and low education are generally associated with low utilization rates and low use of preventive health practices in nonmigrant populations.

Use of resources

The 1957 midseason study in New York offers some limited insight as to the use of health resources by migrants. Only 55 percent of the migrant population studied reported the use of a physician, hospital, or dentist during the 12 months preceding the interview (table 10). About half had used a physician at least once. About 1 person in 6 had used a dentist. About 1 person in 12 had spent some time in a hospital.

A greater percentage of females than of males used the services of a physician and of a hospital, in part because of childbirth and maternity care. From a more detailed analysis it was concluded that the younger, better educated migrants were more likely than other migrants to visit a physician or to spend time in a hospital.

Maternal health practices

A total of 77 of the migrant women aged 16 and over reported 148 live births in the 5 years preceding the 1957 study. Of these births, 53 percent were in a hospital; 55 percent were attended by a physician, 44 percent by a midwife, and 1 percent by a public health nurse.

Prenatal checkups were reported for 96 percent of the births; 80 percent were followed up by a postnatal checkup. The younger mothers tended to have better maternal health practices. Education, though not a factor in other aspects of maternity care, was related to having the first prenatal checkup earlier in pregnancy.

Comparisons

Comparative evidence from studies of the use of health resources by the rural population in six New York counties made by the Department of Rural Sociology at Cornell suggests that the migrants are

TABLE 10.—*Use of selected health resources by migrants during 12 months preceding interview in New York in 1957, by sex and worker status*

Resource used	Total	Male	Female	Worker	Nonworker
Percentage of migrants using—					
Physician	48.8	43.7	59.1	50.2	43.2
Dentist	16.6	16.2	17.2	19.0	7.0
Hospital	8.5	7.4	11.0	8.8	7.4
Total using one or more health resources	54.8	50.1	64.3	57.2	45.3
Number reporting	1,184	800	384	941	243

less likely to follow such preventive health practices as vaccination and immunization of children, that the mothers make less use of recommended maternal health practices, and that the migrants make considerably less use of physicians and dentists. Although a smaller percentage of migrants had used the services of a hospital, the users stayed in the hospital at least as long as the resident rural New York users. The great importance of school and public health services in providing preventive health measures for children of migrants is implied by the age at which they receive immunization and vaccination.

Outlook and Recommendations

The role of migratory agricultural workers is not in the traditional heritage of American rural society. Migratory farmwork is a comparatively recent development in the United States. Although the work done has social importance to the society, the occupational role has low social prestige. Considering the goals and values of American society, social problems are inherent in the kind of mobility which is a necessary characteristic of migratory farmwork. These problems are intensified when the low prestige migratory worker role is occupied by members of a disadvantaged minority group.

The needs of society for the migrant farmworker's contribution in the production of desired fruits and vegetables run counter to full solution of the problems inherent in migratory farmwork. The compromise, in terms of public and social policy, is to minimize the need for migratory farm labor and to insure that the migratory role is a transitional one in the occupational and residential history of the individual rather than a lifetime career and that the inherent problems are minimized as far as possible for individuals and families while they are in the migratory role.

Established patterns of interstate movement of workers in the East were reported around 1900, but present patterns began to develop about the time of World War I. Dependence on such labor became pronounced on the Atlantic coast during and after World War II. The development of extensive production areas of specialized crops with high harvest labor requirements, including fruits and vegetables for which timely harvest is essential to avoid crop loss, led to the movement of workers from area to area over long distances.

Society's future need for migratory farmworkers on the Atlantic coast will be influenced by (1) the trends in the production of high labor requirement crops, (2) the development and adoption of labor-replacing technology in the production of these crops, (3) the extent to which nonmigrant workers are recruited and used, and (4) labor management practices which increase the efficient utilization of seasonal and other farm labor.

The workers' willingness to continue as migrant farmworkers or to become migrants will be related to (1) the alternative work opportunities as reflected in the general level of nonfarm employment and unemployment, (2) comparative wage rates and earnings, (3) comparative employment practices of farm and nonfarm employers, and (4) public and private programs which ease the problems associated with migratory work.

Because so many "migrants" also do nonfarmwork and farmwork other than working in crops within any given year and because the majority aspire to enter nonfarm occupations, it is clear that these workers and their families benefit from any measures which sustain a high level of employment, which increase income, which reduce discriminatory employment practices, and which raise their job skill levels. Likewise, they benefit from any measures which increase their competence for citizen participation and which contribute to security and general social well-being.

In view of the small percentage of hired farmworkers who are migrants, there is at least a question as to the share of the nation's resources and attention which should be devoted to special programs for migrants as compared with other hired farmworkers.

The need for some special programs for migrants grows out of their migrant status and interstate movement. The fact that the extensive use of interstate migrants on the eastern seaboard is limited to a few States and to a comparatively small number of counties makes it possible easily to identify labor-using areas and corresponding governmental units where efforts should be centered. The organization of the migratory labor movement in the Eastern States, involving a restricted number of crew leaders, employers, and farm labor camps, suggests these as focal points for program activity.

The principal purpose of this report has been to analyze recent trends and the current situation with respect to interstate seasonal agricultural workers in the Atlantic Coast States from Florida to New York. As a result of this analysis, however, the following suggestions are offered regarding public policy and public and private programs for improving the welfare of migrant farmworkers in the Atlantic coast stream:

(1) More uniformity in the laws pertaining to migratory agricultural workers and their families should be encouraged among the Eastern States.

(2) The possibility of a regional interstate compact of major migrant-labor-supplying and migrant-labor-using States should be explored; such a compact would have the purpose of developing appropriate common legislation and developing and expanding joint programs for overcoming the handicaps in the use of essential public social services encountered by migrants and their families by virtue of their multiple locations in the course of a year.

(3) Special emphasis should be given to programs which will raise the educational and skill levels of the migrants. Ongoing programs need to be continued and expanded; this includes migrant child care programs, summer school programs for children of elementary and secondary school age, and adult education. The need for Federal or State financial assistance to local school districts having a seasonal influx of school-age children during the regular school term should be considered.

(4) Mobile facilities should be expanded (or established, where lacking) for such social services as health care, libraries, and possibly education. Continuation and expansion of health programs is important.

(5) Consideration should be given to insuring the availability of legal aid services for migrants.

(6) Educational and training programs for employers and crew leaders need to be developed and expanded, with emphasis on labor management and worker training, in order to increase the effectiveness of labor utilization and to make better use of the workers' available time.

(7) Attention needs to be given to further development and testing of alternative arrangements for housing migrants. Mobile housing offers one alternative. Dispersed housing—to overcome the lack of privacy which has been noted as one problem associated with migrant housing (*2, pp. 38–39*)—with transportation to services might be tested against large, more centralized housing centers provided with essential services.

(8) Consideration needs to be given to workable means of extending to all employed in migratory farmwork the protective measures relating to income, accident insurance, and other commonly accepted minimum social welfare provisions now generally limited to such select categories of farmworkers as contract Puerto Ricans, foreign nationals, and workers subject to the Sugar Act. In the development of such measures, attention should be given to administrative policies which will insure that low-skilled and part-time workers will not be denied an opportunity to work, at the cost to society of increased direct welfare payments.

(9) As long as society has a vested interest in maintaining a group of migratory agricultural workers, individual employers might be rewarded for good migrant labor practices through a federally financed support system comparable to incentives which have been paid for conservation and agricultural adjustment practices. Communities which have large numbers of migrants on a seasonal basis, putting a strain on local public services, might likewise be compensated in a way similar to "impacted" communities exposed to unusual demands due to population fluctuations introduced by activities of the Federal Government.

(10) The lack of recent comprehensive information on the characteristics and economic and social conditions of the people in the Atlantic coast migratory labor stream indicates the need for periodic research to provide up-to-date information as a basis for understanding the situation and developing appropriate policies and programs.

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Appendix

TABLE 11.—*Average number of days worked for wages in farm and nonfarm work by migrant workers during 12 months preceding interview in New York in 1959, by age and sex*

Age and sex of workers	Number of workers	Average days worked				
		Total[1]	Farmwork			Nonfarmwork
			In crops	General farmwork[2]	Food processing	
Males:	280	198	110	17	17	54
10–15	7	84	84			
16–19	44	159	87	5	11	56
20–24	41	213	100	21	28	64
25–34	64	210	106	22	19	63
35–44	68	214	118	15	22	59
45+	56	200	132	22	9	37
Females:	120	145	96	1	14	34
10–15	5	21	21			
16–19	18	87	74		8	5
20–24	24	157	77	3	11	66
25–34	31	161	111	1	21	28
35–44	25	147	103		18	26
45+	17	190	127	2	10	51

[1] Nonwagework and farming for self are not working for wages.

[2] "General farmwork" is associated with activities of year-round hired workers, such as tractor driving and care of livestock.

TABLE 12.—*Average number of days not worked by migrant workers and reasons for not working, during 12 months preceding interview in New York in 1959, exclusive of travel time, by age and sex*

[Data in average days not worked]

Sex and age of workers	Number of workers	Reasons for not working								
		Total	Arrived early or slack season	Crop loss or bad weather	Regular days off or holidays	Moving or on vacation	Ill or unable to work	Keeping house	In school	Other reasons [1]
Males	280	162	47	16	58	12	5	......	15	9
10 to 15	7	276	6	9	72	9		......	178	2
16 to 19	44	202	25	12	62	15	2	......	60	26
20 to 24	41	147	45	9	68	13	3	......	4	5
25 to 34	64	150	54	16	55	11	3	......	3	8
35 to 44	68	186	86	21	58	5	8			8
45+	36	160	62	18	47	19	8			5
Females	120	214	38	13	53	18	8	57	26	1
10 to 15	5	320	53	3	97	30			135	1
16 to 19	18	273	30	5	70	30	1	26	111	
20 to 24	28	205	50	12	55	15	6	59	7	([2])
25 to 34	31	198	47	18	55	29	9	38		2
35 to 44	25	213	41	12	35	11	2	112		
45+	17	170	22	19	45	([2])	32	54		1

[1] Includes employment in nonwage farmwork, farming for self, etc.

[2] Less than half a day.

TABLE 13.—*Average daily and average annual earnings from wagework in all locations; average annual income from all sources for 12 months preceding interview in New York in 1959; by age and sex of worker*

Sex and age of workers	Average daily earnings	Average annual wage earnings	Average annual income
Males:	$7.23	$1,418	$1,462
10 to 15	4.60	367	398
16 to 19	5.90	952	992
20 to 24	7.82	1,666	1,705
25 to 34	7.98	1,686	1,752
35 to 44	7.41	1,305	1,649
45+	6.67	1,292	1,330
Females:	$5.09	$725	$752
10 to 15	2.63	36	36
16 to 19	4.96	390	405
20 to 24	5.00	790	852
25 to 34	5.65	876	880
35 to 44	5.19	768	852
45+	4.82	627	636

ACKNOWLEDGMENTS

The author is indebted to many persons for their contributions to this report and to the studies made in New York in 1957, 1958, and 1959 which provided much of the data on the economic and social characteristics and conditions of Atlantic coast migratory farm workers.

Lucy M. Cummings provided editorial assistance and typed the report. Juliette Klein assisted in analysis of previously unpublished data and, with Patricia Gaines and Edith L. McCommon, was responsible for special compilations and tabulations.

Emmit F. Sharp, formerly with the Department of Rural Sociology, Cornell University, and Nelson LeRay, Economic Research Service, USDA, were principal collaborators in conducting the New York studies and in the preparation of the reports which have been published. Joe R. Motheral, Orlin J. Scoville, Earl Houseman, and William H. Metzler, all of the USDA, participated in planning or provided valuable counsel in one or more of the studies. Assistance and valuable suggestions for the studies were also received from Nelson Shipper and Richard K. Kiley, New York State Employment Service; Alonzo L. Waters, Chairman, New York State Joint Legislative Committee on Migrant Labor; and Dr. Walter Levy, New York State Department of Health.

Chapter 26

The Distribution of Benefits From Selected U.S. Farm Programs

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Perhaps one should begin by asking, "Of what value in poverty policy considerations is knowledge of the distribution of benefits from farm programs?" The answer involves several matters.

In mid-19th-century America, rural life meant farm life. There was then little economic activity in rural America beside that generated by farming. Of the total U.S. population in 1865, three-fourths was rural and practically all of that was on farms (*9*).[1] One hundred years later, less than 30 percent of our population is rural, and less than 6 percent is on farms (*8, 10, 11*). Today, as a result of the economic development of agriculture and the creation of other employment in rural America, farmers and their families account for less than one-fourth of the rural population. Thus, despite a higher incidence of poverty in farming, two-thirds of all rural poverty is not to be found in farming at all, but in nonfarm rural life (*4*). Even well-designed programs for the poor farmer cannot solve the problems of all rural poverty.

More important to the immediate purpose of this paper is another matter. At least since the Great Depression if not before, farm policy has carried among its purposes an explicit or implied goal of helping the rural poor. The congressional farm policy debates have long solicited support for and justified legislation in terms of doing great things for "poor folk." As 19th-century American subsistence farming was transformed in this century into a highly specialized commercial enterprise, command over resources, output, and income in agriculture have become more highly concentrated. Today, less than 10 percent of all farmers produce over half of all agricultural output, and about half of the farmers produce 95 percent of all U.S. agricultural output (*5*). Farm programs, be they credit, conservation, or commodity programs are generally designed in a way so that a farmer's access to them is associated with the size of the assets he controls, the amount of land he operates, and his volume of output. Under such conditions, it is hardly surprising that farm programs have come to be questioned as vehicles for helping the farm poor.

The question raised is that of the efficiency of farm programs as instruments of that part of welfare policy that is concerned with the maintenance of some minimum standard of income and welfare among those at the lowest end of the farm income distribution. There is no doubt that the very small southern farmer would be in far worse shape were it not for the peanut, tobacco, or cotton price support he receives on the little product he does produce. When you have so very little, every bit is important. But that is not at issue. The question here is whether it makes any social policy sense to use farm price and income support programs as the *primary* instrument of assuring some minimum level of living to the very lowest income groups in farm life—as some argue we should.

The answer one can give depends on what type of distributive effects these farm programs have. As presently designed, who receives the benefits? If, for example, the bottom third of farmers receive an equal or disproportionate share (one-third or more) of benefits, then perhaps we could say that the program was a reasonably efficient one for aiding the poor farmer. If, on the other hand, the bottom third of farmers receive far less than a proportionate share (say, less than 10 percent) of benefits, it would be reasonable to conclude that this program probably is inappropriate as the primary vehicle for aiding poor farmers. Any decision rule could be selected, perhaps a less demanding or a more demanding one. In any case, we must know what the distribution of benefits looks like in order to make such a decision. This paper attempts to provide a quantitative measure of the distribution of benefits from eight commodity price and income support programs. The reader may then apply his own decision rule to answer the question of whether farm price and income support programs can be efficient primary instruments of low income policy.

The Procedure

There are many forms in which an income, asset, or benefit distribution can be presented. No one is best for all purposes.[2] For our use the conventional

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

[2] This is well explored in an interesting article by Bowman (*3*).

Lorenz curve appears best adapted. In a Lorenz curve the cumulated percent of aggregate income or benefits is plotted against a cumulated percent of the population receiving that income. This can be seen most clearly in figure 1. If all beneficiaries received exactly the same amount of benefits, the Lorenz curve would be represented by the diagonal line in figure 1. In reality, income and benefit distributions almost invariably plot out below the diagonal. The farther they depart from the diagonal, the greater is the area between the Lorenz curve and the diagonal and the more concentrated the distribution of benefits may be said to be.

Beside organizing our data in Lorenz curve form we will also compute a single average measure of the degree of concentration of the Lorenz distribution of benefits. This is a statistic devised by Gini (3). The Gini concentration ratio can be defined in figure 1 as the proportion of the area under the diagonal that lies between the diagonal and the Lorenz curve.[3] Thus, the Gini ratio can be expressed as follows, using the notation in figure 1:

$$\text{Gini ratio} = \frac{\text{area between curve and diagonal}}{\text{area under diagonal}}$$

Since each axis of the Lorenz curve cumulated to 100 percent, the area in the square bounded by the axes of figure 1 can be defined as 1 and that under the diagonal as ½. Consequently, the definition can be rewritten:

$$\begin{aligned}\text{Gini ratio} &= \frac{\tfrac{1}{2} - \text{area under curve}}{\tfrac{1}{2}}\\ &= 1 - 2\ (\text{area under curve})\end{aligned}$$

Assuming that the distance between any two points on the curve can be approximated by a straight line, the area under any segment of the curve can be defined as:

$$\left(X_{i+1} - X_i\right)\left(\frac{Y_i + Y_{i+1}}{2}\right)$$

Summed over all intervals, the area under the curve is:

$$\Sigma^n_i \left(X_{i+1} - X_i\right)\left(\frac{Y_i + Y_{i+1}}{2}\right)$$

Then substituting in the expression for the Gini ratio above, one obtains the algebraic expression that was used in computing the Gini concentration ratio for this paper:

$$\begin{aligned}\text{Gini ratio} &= 1\text{-}2\ \Sigma^n_{i=1}\left(X_{i+1} - X_i\right)\left(\frac{Y_i + Y_{i+1}}{2}\right)\\ &= 1\text{-}\Sigma^n_{i=1}\left(X_{i+1} - X_i\right)\left(Y_i + Y_{i+1}\right)\end{aligned}$$

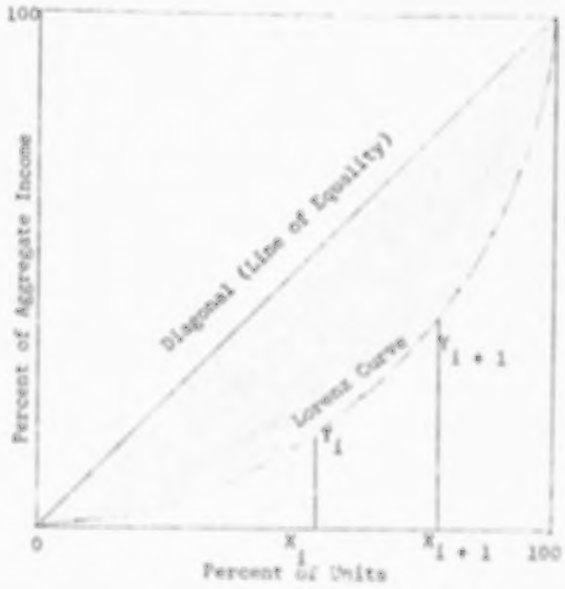

FIGURE 1.—Example showing Lorenz curve and computation of Gini concentration ratio.

The Lorenz curve and Gini ratio constitute components of one type of table within which the data of this analysis is presented (e.g., see tables 1 and 4).

The second type of tabular presentation of benefit distributions which runs through all of the analyses is that of a simple cumulated percent of total benefits going to farmers with allotments under various acreage sizes and over various sizes. In a swirling sea of relative (Lorenz) distributions, it helps in developing perspective to be able to link back into a concrete cardinal dimension of some importance. In the case of this data, the most logical dimension which can be measured directly and with accuracy is that of allotment size. Other than this, no absolute measures are presented here for reasons that will be discussed in describing the procedure used in aggregating the State distributional data into distributions for regions and for the United States.

Data Sources

Constructing Lorenz curves of farm program benefit distributions requires highly articulated distributional data or a great mass of detailed data from which such distributions can be constructed. This kind of data is rarely available for public programs. It is a measure of the capacity and sophistication in program administration that the Agricultural Stabilization and Conservation Service (ASCS), alone of action program agencies of which I am aware, has in recent years begun to construct such distributional data.[4] For several of the major commodity programs ASCS has constructed distributions of farm numbers and planted acreage (or allotment acreage in some cases) by allotment size classes, by State. In other words, for each State in which the crop is grown, and for those farmers who participate in the program, one can obtain distributions of acreage planted and farm numbers by size of allotment. In the case of some commodities where diversion, price support, and certificate payments are a major part of the program, these direct payments are also available by State and allotment size class of recipient. Since it is expensive to prepare, such data are available only for selected years and in some cases only for one crop year. Variations in the nature of the data from commodity to commodity will be noted as the individual commodities are discussed.

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[3] This presentation is based on Miller (6) and Morgan (7).

One may have considerable confidence in these data since they represent no sample, but a complete enumeration from a program eligibility process in which accuracy is of the utmost import in administration.

Nature and Types of Benefits Measured

We must answer the question of what is the nature of the benefit distribution, i.e., the State Lorenz curve and Gini ratio, formed directly from the basic data. How are these benefit distributions to be interpreted?

Farm program benefits come in several different forms. That most frequently encountered in this analysis is an estimate of price-support benefits. The State distributions of price-support benefits are formed from a percent distribution of total acreage allotments, or in most cases total planted acreage, by allotment size groups—under the assumption that price-support program benefits are distributed in proportion to acreage allotments held or in proportion to the planted acreage of program participators. Thus, the distribution of allotment rights, or of acreage actually planted within those rights, is used as a proxy for the distribution of benefits. While there is no cardinal measurement of benefits involved in this approach, the procedure does imply that we are dealing with an estimate of gross benefits, without opportunity costs netted out. In other words, since we have not created an over-all equilibrium framework or model, we do not know what the next best use of these resources might be. By implication we are assuming complete fixity of resources in the farm production process and that net benefits from the program are distributed in the same manner as gross benefits.

The second type of benefit distribution is that involving direct payments of money to beneficiaries. These data measure directly the money which is transferred since the data are reported in dollar value form by State and allotment size class. Thus, there is no estimation or approximation procedure necessary. Since the data are in dollar value form they are self-weighting and, as a consequence, the possible biases and uncertainty in aggregation to region and the United States encountered in the price-support benefit estimation procedure is not present in any of the various types of direct payment distributions.

For the purpose of computing a Lorenz curve a cumulated distribution of payments is formed from a percent distribution of total payments by allotment size groups. The data for all the different types of direct payments are available in the form of total payments made to eligible program participators in each State arrayed by their allotment size class.

While the data come in similar form, there are several sorts of direct payments. Certificate payments are unique to the wheat program where farmers who limit their acreage in cooperating in the program are issued certificates for each bushel of "normal yield" on a specified portion of their total allotment. In 1964 the cost of certificates was borne entirely by the wheat miller who had to purchase certificates for each bushel milled.[5] The Commodity Credit Corporation keeps a record of the certificates and their value.

Price-support payments are very similar but are paid by the government to farmers who participate in certain commodity programs, e.g., in feed grains and cotton. In general, price-support payments are made on the basis of allotment acreage and "normal yield" as determined by an ASC county committee, but may sometimes be complicated by other computational features. Certificate and price-support payments are a substitute for price-support loan guarantees allowing lower loan rates and market prices to prevail for any given level of farm income established as the support program objective.

The other form of direct payment is the diversion payment. As its name suggests, it is a payment made for voluntarily diverting acreage from production, and it is a feature of the wheat and feed grain programs.

While we do not need to estimate any of the direct payments since the value of the benefit is reported directly in dollar form, in a strict opportunity cost sense these dollar payments are a gross benefit. This is most obvious in the case of the diversion payment where a farmer must forego the use of a certain amount of his acreage and therefore, presumably, income in order to qualify. This is less obvious, but quite as true of price-support and certificate payments also, for even in these cases the farmer obtains the benefit by complying with the program eligibility criteria which are primarily acreage limitations. The economic value question for these payments, however, is whether, after the price elasticities of supply and demand have worked their will, the true opportunity cost value of the payment to the farmer is less than or more than the direct value transferred. It is not at all impossible in some of these farm commodities that the opportunity cost value of payments exceeds the payment proper.

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[4] The author attempted recently to do a study for the Brookings Institution on the topic of "The Distribution of Benefits from Selected Federal Subsidy Programs." After exploring statistical sources on a wide range of programs, including those of the Federal Aviation Agency, the Bureau of Reclamation, and the Maritime Administration in some depth, it was concluded that without substantial additional data collection it would be impossible to construct meaningful benefit distributions of any sophistication on any of the programs other than certain USDA price and income support programs and one conservation program—all administered by ASCS.

[5] In 1964 a farmer received domestic certificates worth 70 cents per bushel on 45 percent of his allotment and export certificates of 25 cents per bushel on 45 percent of his allotment. A normal yield is established for each farm by the county ASC committee.

It is easily seen that where aggregation of several different types of benefit streams is necessary to arrive at a total program benefit estimate, one has added together some very different problems. This kind of an aggregation, while presented here for wheat and feed grains, should be treated as a rough approximation and handled with considerable care.

The Aggregation Procedure

Because we must aggregate State distributions to get regional and national distributions, there is need to establish a system of relative value weights for the States.

Ideally, State benefits should be valued within the framework of a general economic adjustment or equilibrium model which would attach values to the benefits in terms of the economic (or alternative market) consequences of eliminating or instituting a support program of some specified sort. In other words, one needs a framework in which appropriate demand and supply functions (for the United States, regions, or States) give an equilibrium meaning to the value of benefits which are arrayed in the benefit distributions. This is not possible within the limits of this paper.[6]

In this paper we shall attach value to an acre of a program participator's allotment or planted acreage by weighting that acre by the product of that State's season average price and yield. This will tend to reflect the differences in productivity per acre and the market evaluation of differences in quality of output between States. This is, however, a very rough or approximate means of valuing State benefits. Certainly, no confidence can be placed in the absolute value so computed. However, we do not need an absolute measure of benefit value for our analysis.[7]

We need only an index of relative value for use as weights whenever State distributions are to be combined into regions and to U.S. totals.[8] The index of value, thus, has an effect only on regional and U.S. Lorenz curves and Gini concentration ratios. The relative value weight used for aggregation has no operational effect on the individual State Lorenz curves and Gini ratios. This weighting procedure by implication assumes complete fixity of resources in individual commodity production processes.

Sensitivity was done to measure the effect of variations in this index of relative value weights upon the Gini concentration ratios. It was found that variations in the State weights had far less effect on the resulting regional and U.S. concentration ratios than did the differences between States in the mean allotment and the variation in relative dispersion around the mean.[9] In regions of more than three States, the variation in the relative weights had to be very considerable before the effect on the Gini ratio was pronounced. It should be noted, too, that differences within regions tended to be less than between regions. Overall, we do not believe that the margin of error is large in either the regional or U.S. computations. Nevertheless, some caution is advisable in using these aggregate computations of regional and U.S. Lorenz curves and Gini ratios.

Limitations of the Estimating Procedure

Beside the care that must be exercised in using the regional and U.S. aggregates, other matters must be recognized in interpreting these data.

There may be unsystematic distortion in the relative relationships of Lorenz curves and Gini concentration ratios. In any given commodity, to the extent that efficiency in production (supply functions) and the income that could be earned by the same resources in alternative employment varies greatly between allotment size classes, distortion is introduced into our measures of a State's benefit distribution. Similarly, to the extent that there is wide variation in these factors, we will find distortion introduced into our measures of U.S. and regional benefit distributions—but in this case partly as a result of our aggregation procedure which also assumes resource fixity.

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[6] The author developed a partial equilibrium framework for valuing price-support program benefits in a recent paper, "The Distribution of Benefits from the Cotton Price Supports," in Samuel B. Chase, Jr. *Problems in Public Expenditure Analysis*, The Brookings Institution, Washington, D.C., 1968.

[7] As indicated previously, the only absolute measure which we have allowed to be expressed in our analysis is a distribution of benefits by allotment size groups—and this is a dimension of the primary data and not a product of our analysis.

[8] Also, value weights are necessary in those cases where various direct payments are combined with price-support benefits for a combined or total program benefit distribution for a State.

[9] It is this difference in the data upon which the State Lorenz curves are based that produces the apparently startling results of regional Gini concentration ratios which fall above or below all of the component State Gini ratios (e.g., see the Southeast region of tables 16, 17, and 18 and also footnote 20). See also the discussion of this phenomenon in the rice program section of this paper. For a specific comparison in which the effect of different value weights are made explicit, see footnote 18 in the cotton section of this paper.

A general exploration of the effect of these potential distortions suggests that, with a few exceptions, production conditions within States are sufficiently similar that there is probably not too much distortion between size classes in the distributions by State. One can be less sure in the case of regional distributions. Sensitivity analysis which was done suggests that the U.S. distributions are less likely to reflect these *relative* distortions than regional distributions. While the Lorenz curves and Gini ratios estimated for price-support benefits should be treated as approximations, the author has considerable confidence in the State distributions and only slightly less confidence in the U.S. distributions. The regional distributions should be used with greatest care. For use as a rough guideline of reliability let me report that in only a very few cases, even with major changes in components, did Gini concentration ratios change as much as ±.05 point.

The concern here is with those elements of the procedure which can produce uncertain and unsystematic distortion in the relative relationships between Gini statistics and between Lorenz curves.

The logic of our procedure and the limitations of the data also suggest certain systematic bias in the results reported here. For accurate interpretation the reader will need to understand these. We have pointed repeatedly to the assumption of resource fixity. Since productivity, unit cost of production, and the profitability of alternatives to a commodity (i.e., supply functions) vary greatly from area to area, the supply response to a decline in price is unlikely to be distributed proportionately among regions or States. For example, unit costs are generally lowest in those areas which presently produce the most output per acre. To some extent, in many commodities, these also tend to be the areas where there are proportionately more of the larger allotments. The higher unit cost areas in which smaller allotments predominate should be forced out of production first, and the lower unit cost areas last, as prices fall. Thus, the estimate of the benefits for the higher productivity areas will tend to be overstated while those for the lower productivity areas may be understated somewhat.[10] This would cause the measure of benefit concentration, i.e., the Gini ratio, to be overstated.

However, all other characteristics of the benefit estimating procedure tend to understate the degree of concentration in benefit distributions. In my judgment, they more than offset the one major source of overstatement just noted. Several characteristics of the estimating procedure tend to result in a net underestimate of the Gini ratios.

Due to lack of more detailed data, we are forced to use State average yields for all allotment sizes within a State. Yet we know that yields on the larger allotments tend to be higher than those from smaller allotments. This tends to understate the degree of benefit concentration.

In estimating the Lorenz curves it was necessary in many cases to create one-fourth to one-half of the curve from a linear extrapolation of only one observation in the basic data. This biases the Lorenz curve toward equality of distribution and understates the concentration of benefits.

The estimating procedure assumes, of necessity, that each allotment planted constitutes a single, independent, and separately owned farm—which is not always the case. Our data allow for the most typical allotment use transfers such as are accomplished through release and reapportionment, and in most cases, land rentals. These account for practically all of the combining of smaller allotments. However, in addition, some larger farmers control and operate more than one allotment through other members of their family and through complex equity arrangements.

On balance it seems clear that the data limitations and the character of our procedure tend systematically to understate the degree of benefit concentration. This is without any question true of all individual State Lorenz curves and Gini concentration ratios, for the only factor which tends to overstate concentration is associated with the process of aggregation to regional and U.S. Lorenz curves and Gini ratios. Even in the latter case the net bias is apparently an understatement of concentration with the primary effect of the factor leading to overstatement to be found in a distortion of the relative relationship between regional concentration ratios. Clearly, the State and U.S. Gini concentration ratios may be used with confidence. The regional measures should be handled with considerable care. In any case we can be sure that in this analysis the degree of concentration of benefits is not exaggerated.

Finally, the point also needs to be made that a Gini concentration ratio is descriptive and carries no normative implications. The act of measuring the concentration of benefits in a Gini ratio does not imply that a superior value is placed on complete equality of distribution (a Gini of zero) or on maximum concentration (a Gini of one), or on any specific degree of concentration in between. The Gini ratio is descriptive. The value one places on any specific degree of concentration depends upon the objectives one has in mind and the relative value one attaches to the ends involved. We shall return in our conclusions to the question of value interpretation. Now, however, let us establish a descriptive measure of the distribution and relative concentration of benefits for several farm programs.

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[10] I am indebted to Dale M. Hoover for pointing out to me the possibility that in low productivity areas where the total (but not variable) cost of production exceeds the return in the next best alternative market, but is less than the original supported market price, the benefits are overstated rather than understated.

The Rice Program

The rice program is a straightforward price-support operation in which the entire crop is potentially eligible and exports at the much lower world market prices are possible only as a consequence of export subsidies. The program benefits for rice producers can be associated directly with the effect of price supports and acreage allotments upon the domestic market into which the first sale occurs.

In the case of rice we have data for the 1963 rice crop for the number of farms and total acreage allotment by allotment size groups by State. For all practical purposes no rice is grown outside of the program. The use of allotment acreage is not as satisfactory as planted acreage would be, but distributions by planted acreage are not available. However, failure to plant and crop failure do not bulk large in the 1963 crop: 1,771,000 acres were harvested out of a total U.S. allotment of 1,816,000 acres.[11] Assuming that price-support benefits within States are distributed in proportion to acreage allotment, and aggregating State distributions on the basis of a relative value of production index constructed from State season average prices and production, Lorenz curves were computed for the distribution of price-support benefits.[12]

These Lorenz curves are presented in table 1 along with the related Gini ratios of concentration of benefit distribution.

From table 1 it can be seen that the distribution is highly skewed with half of all rice farmers getting no more than 10 percent of the benefits and 10 percent of the largest allotment holders receiving 40 to 50 percent of total benefits. This varies a bit by States with the distribution of benefits being least concentrated in Mississippi (Gini of .454) and most concentrated in Louisiana (Gini of .642).

The same general degree of concentration can represent quite different distributions of total benefits by allotment size. This can be seen in table 2 where a comparison of Texas and Louisiana benefit distributions by allotment size shows the total benefits in Texas distributed more toward the upper end of the size of allotment scale when compared to Louisiana. Yet, the Gini ratio (concentration of benefits) is lower in Texas than Louisiana. The explanation of this lies in the fact that the average allotment per farmer is substantially larger in Texas than in Louisiana, *but individual allotments tend to be distributed more closely around the State average*. It is the interaction of variation between means and variation in *relative* dispersion around

TABLE 1.—*Distribution of 1963 rice price-support program benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Missouri	0.6	1.6	4.4	11	89	75	58	38	5.0	.557
Mississippi	0.4	2.3	7.9	20	80	66	48	31	4.6	.454
Arkansas	0.3	1.3	4.7	13	87	73	57	40	9.6	.555
Louisiana	0.1	0.8	3.2	9	91	81	66	48	14.5	.642
Texas	1.0	3.0	7.6	16	84	71	57	42	8.0	.525
South	0.1	1.0	3.5	10	90	79	64	46	14.2	.623
California	0.9	2.4	5.4	12	88	77	62	44	7.5	.585
United States	0.1	1.0	3.6	9	91	80	65	48	15.2	.632

Sources: (a) Rice: Frequency Distribution of Number of Farms and Acreage Allotted to Such Farms in 1963, by States and Specified Acreage Groups. USDA, ASCS, Policy and Program Appraisal Division. Mimeo., December 17, 1963.

(b) Agricultural Statistics, 1965. USDA, 1965, p. 21. Prices and production data by State were used to obtain the weights for combining the distributional data from source (a).

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

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[11] See source (a) of table 1 and (*13, p. 21*).

[12] Due to lack of price data the minor rice producing States of South Carolina, Tennessee, Florida, Oklahoma, North Carolina, and Illinois were omitted entirely from the analysis. These States account for 45 farms and 4,456 acres of allotment.

TABLE 2.—*Distribution of 1963 rice price-support benefits: Proportion of U.S., regional, and State benefits received by farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of total benefits accruing to farmers with allotments—										
	Under 6 acres	Under 11 acres	Under 26 acres	Under 51 acres	Under 76 acres	Under 101 acres	Under 201 acres	201 acres and over	301 acres and over	501 acres and over	1,001 acres and over
Missouri	0.9	1.9	7.6	15.3	26.5	38.2	67	33	66	0	0.0
Mississippi	0.0	0.1	0.7	2.7	4.5	8.7	38	62	41	17	2.1
Arkansas	0.3	0.9	3.8	10.8	21.0	32.3	62	38	23	11	4.2
Louisiana	0.1	0.7	4.8	12.2	19.7	26.2	49	51	35	20	10.4
Texas	0.0	0.0	0.3	1.7	3.6	6.5	22	78	62	42	22.9
South	0.1	0.5	2.8	7.8	14.1	20.8	43	57	40	24	12.4
California	0.0	0.1	0.5	3.1	6.4	8.9	21	79	65	49	21.8
United States	0.1	0.4	2.3	6.9	12.5	18.4	39	61	45	29	14.9

Source: Rice: Frequency Distribution of Number of Farms and Acreage Allotted to Such Farms in 1963, by States and Specified Acreage Groups. USDA, ASCS, Policy and Program Appraisal Division, Mimeo., December 17, 1963.

the means that explain the unusual, but not uncommon, result in which regional or U.S. concentration ratios exceed or fall below all or most of those of its component States. For example, in rice only Louisiana has a concentration ratio (.642) higher than that for the United States (.632). All other States have substantially lower Gini ratios—ranging from .454 to .585.

The value of the 1963 crop in the States analyzed was a little over $352 million, with Texas, Arkansas, and Louisiana ranging from $96 million down to $84 million, followed by California at $71 million. Mississippi produced a $10 million crop and Missouri a little under $1 million (*12, p. 21*).

The Wheat Program

We have the opportunity in the case of the wheat program of examining the effect on concentration of benefits of the use of direct payments along with conventional price supports. In the wheat program in 1964, besides a regular price-support operation of nonrecourse loans and acreage allotments, payments were made directly to eligible farmers in the form of certificate payments and diversion payments. Anyone who complied with allotment restrictions to become eligible for price supports also became eligible to receive certificate payments on all wheat sold for food purposes.[13] Diversion payments were paid on acreage voluntarily diverted from wheat to conserving uses (beyond normal acreage already in conserving uses on the farm) up to a limit of 20 percent of allotment. In 1964 the payment per acre diverted was set at 20 percent of the county loan rate per bushel, multiplied by the normal yield per acre of wheat on the farm. The national loan rate in 1964 was $1.30 a bushel.

Data are available from the 1964 program on all three types of benefits: price supports, certificate payments, and diversion payments. Both certificate payments and diversion payments are directly available in the form of numbers of recipients and total dollars of benefits received in distributions by allotment size group and by State. Price support benefits are computed in much the same fashion as for rice, except that allotment on farms of program participators was used instead of actual State harvested acreage in computing weights. This is necessary since almost one quarter of the total allotment was on farms that did not participate in the program.[14] Assuming that price-support benefits within States are distributed in proportion to acreage allotments, and aggregating State distributions on the basis of a relative index of the value of production on allotments (constructed from State season average prices, yields, and allotments) Lorenz curves were computed for the distribution of price-support benefits. Lorenz curves are computed directly from the distributional data for certificate payments and diversion payments since it is in dollar form and thus self-weighting.

These Lorenz curves are presented in tables 4, 5, and 6 along with the related Gini ratios of concentration for each Lorenz curve. Over 250 Lorenz curves and Gini ratios were computed for the feed grain program. Since it is difficult to get a general sense of so many distributions, the concentration ratios have been brought together in one summary in table 3. The variation in concentration between types of benefits and regions is quite diverse.

The general pattern is for price-support benefit distributions to be most highly concentrated, certificate payments next, and diversion payments least concentrated. However, in three regions, the North Central, South, and Northeast, certificate payments were most concentrated of the three types of benefits. Except for the major production (hard wheat) areas of the Great Plains, the diversion payment distributions are considerably less concentrated than price-support benefits. Normally one would not expect that when combined into a total benefit distribution (see table 8) that the degree of benefit concentration would generally be greater than any of the component benefit streams—but this is the case in wheat. Thus, the effect of moving from a straightforward price-support system to a mix of price supports and direct payments—as presently designed—does not appear to lead toward greater equality in benefit distribution as some have argued it should and would.

Regional Patterns

Only the first three regions in table 4 are major wheat-producing areas. Of these, the North Central region is least concentrated (Gini of .369), the Great Plains next (Gini of .482), and the Northwest most concentrated (Gini of .644). The scale of wheat farming is typically far smaller in the North Central region in contrast to the Great Plains and Northwest. Ten percent of the largest farmers receive nearly half of the price-support benefits in the Northwest, over one-third of all benefits in the Great Plains, and 29 percent in the North Central region. Nationally, 44 percent of all price-support benefits go to the upper 10 percent of the larger farmers, while the lower half of all wheat farmers receive 12 percent of the benefits. The lower 50 percent of farmers in the Northwest receive only 9 percent of price-support benefits, in the Great Plains they receive 20 percent of the benefits, and in the North Central region 25 percent.

The pattern of certificate payments distribution is quite similar to that of price supports although the degree of concentration is slightly less (see table 5).

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[13] Payments of 70 cents per bushel were made on normal yield (as determined by the farmer's county ASC committee) on 45 percent of a farmer's allotment (his share of domestic consumption) and 25 cents per bushel on normal yield on 45 percent of a farmer's allotment (farmer's share of export volume). Ten percent of the crop was estimated to go to feed and seed, a use for which certificates are not issued.

[14] See source (a) for table 4, p. 1.

TABLE 3.—*1964 Wheat: Summary of Gini concentration ratios by type of benefit for United States, region, and State* [1]

State	Price-support benefits	Certificate payments	Diversion Payments	Total direct payments	Total benefits
Colorado	.531	.508	.509	.525	.529
Kansas	.466	.467	.472	.471	.468
Montana	.478	.467	.438	.480	.478
Nebraska	.444	.442	.407	.447	.445
New Mexico	.563	.507	.511	.538	.556
North Dakota	.381	.369	.361	.373	.379
Oklahoma	.428	.421	.430	.429	.428
South Dakota	.484	.499	.482	.506	.490
Texas	.571	.550	.555	.562	.569
Wyoming	.477	.479	.458	.493	.481
Great Plains	.482	.477	.470	.484	.483
Idaho	.641	.546	.527	.555	.622
Oregon	.650	.610	.571	.644	.649
Washington	.546	.502	.495	.520	.540
Northwest	.644	.594	.575	.610	.636
Illinois	.330	.326	.300	.332	.331
Indiana	.324	.316	.242	.335	.326
Iowa	.413	.395	.375	.412	.413
Michigan	.307	.314	.094	.358	.318
Minnesota	.502	.524	.457	.530	.509
Missouri	.381	.376	.209	.406	.386
Ohio	.339	.329	.182	.356	.343
Wisconsin	.231	.238	.111	.254	.237
North Central	.369	.373	.229	.397	.376
Alabama	.590	.494	.244	.630	.598
Arkansas	.635	.658	.507	.679	.645
Florida	.451	.433	.136	.494	.460
Georgia	.394	.496	.137	.465	.407
Kentucky	.437	.403	.186	.477	.446
Louisiana	.563	.572	.500	.584	.568
Maryland	.335	.317	.171	.356	.340
Mississippi	.550	.515	.447	.563	.553
North Carolina	.211	.229	.073	.214	.212
South Carolina	.308	.399	.105	.365	.319
Tennessee	.414	.402	.165	.456	.423
Virginia	.313	.342	.117	.344	.320
West Virginia	.364	.360	.171	.377	.367
South	.409	.444	.135	.455	.418
Delaware	.312	.327	.301	.330	.316
Maine	.673	.392	.282	.708	.681
Massachusetts	.210	.190	.482	.160	.200
New Jersey	.459	.423	.154	.497	.468
New York	.398	.383	.120	.448	.409
Pennsylvania	.282	.299	.085	.318	.290
Northeast	.376	.384	.126	.418	.386
Arizona	.551	.452	.489	.528	.547
California	.676	.514	.527	.596	.659
Nevada	.660	.618	.568	.688	.666
Utah	.707	.594	.466	.609	.687
Southwest	.716	.624	.578	.652	.703
United States	.566	.544	.480	.577	.569

Sources: See tables 4, 5, 6, 7, and 8.

[1] For an explanation of the Gini concentration ratio see section on procedure in this paper.

The same pattern of distribution can be identified again in the case of diversion payments (see table 6), but the degree of concentration is even lower.

The certificate payment and diversion payment distributions are combined into a total direct payment distribution and presented in table 7.

TABLE 4.—*Distribution of 1964 wheat price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Colorado	0.7	2.7	8	15	85	72	57	39	9.0	.531
Kansas	1.3	3.6	10	21	79	68	52	36	7.9	.466
Montana	0.8	3.7	8	18	82	69	51	32	7.0	.478
Nebraska	2.4	4.7	10	19	81	63	48	37	8.9	.444
New Mexico	0.4	1.6	6	12	88	75	60	41	8.7	.565
North Dakota	1.8	6.6	15	24	76	62	44	30	5.8	.381
Oklahoma	1.3	3.6	12	24	76	64	50	33	7.2	.428
South Dakota	1.3	3.6	9	20	80	69	54	38	8.7	.481
Texas	0.9	2.2	6	14	86	77	61	43	10.5	.571
Wyoming	1.3	3.9	11	19	81	69	53	36	7.4	.477
Great Plains	1.2	3.4	9	20	80	69	53	37	8.1	.482
Idaho	1.4	2.8	5	9	91	80	70	52	12.7	.641
Oregon	0.7	1.3	3	8	92	84	69	48	11.1	.650
Washington	0.5	1.7	6	13	87	74	57	38	8.0	.546
Northwest	0.8	1.6	3	9	91	83	68	48	11.4	.644
Illinois	5.0	9.9	17	26	74	58	44	24	6.4	.330
Indiana	5.3	10.7	18	27	73	58	43	26	5.6	.324
Iowa	3.6	7.3	12	21	79	66	46	29	6.3	.413
Michigan	6.0	12.0	20	30	70	60	43	29	4.5	.307
Minnesota	3.7	7.5	12	19	81	73	60	41	11.9	.502
Missouri	4.9	9.7	16	24	76	63	49	29	7.8	.381
Ohio	5.2	10.5	17	26	74	59	44	28	5.7	.339
Wisconsin	7.5	15.0	25	37	63	50	40	31	6.4	.231
North Central	5.0	9.9	17	25	75	62	48	29	7.5	.369
Alabama	3.1	6.3	10	16	84	79	71	51	13.2	.590
Arkansas	2.5	4.9	8	12	88	83	70	56	19.7	.635
Florida	4.3	8.5	14	21	79	71	57	35	9.1	.451
Georgia	5.8	11.5	19	29	71	62	54	47	12.9	.394
Kentucky	3.9	7.9	13	20	80	68	53	31	8.0	.437
Louisiana	1.3	2.6	6	13	87	76	59	41	11.1	.563
Maryland	3.5	7.1	13	26	74	60	39	21	5.5	.335
Mississippi	1.3	2.7	5	13	87	71	58	42	9.5	.550
North Carolina	7.8	15.6	26	39	61	48	38	30	7.3	.211
South Carolina	6.7	13.5	22	34	66	55	46	39	9.7	.308
Tennessee	4.9	9.8	16	25	75	67	54	38	8.2	.414
Virginia	6.5	13.0	22	32	68	57	48	34	6.3	.313
West Virginia	5.5	11.1	18	28	72	63	51	32	4.6	.364
South	5.4	10.9	18	27	73	64	56	42	11.4	.409
Delaware	3.6	7.2	15	27	73	57	36	20	5.1	.312
Maine	2.4	4.9	8	12	88	84	81	71	7.1	.673
Massachusetts	6.5	13.0	22	32	68	51	31	15	1.5	.210
New Jersey	3.5	7.0	12	18	82	69	53	32	5.9	.459
New York	4.9	9.9	16	25	75	67	51	34	6.4	.398
Pennsylvania	6.7	13.3	22	33	67	56	46	28	5.3	.282
Northeast	5.4	10.7	18	27	73	64	50	35	6.6	.376
Arizona	1.3	2.6	6	16	84	72	61	44	14.2	.551
California	0.5	1.2	3	9	91	84	72	54	15.7	.676
Nevada	0.9	1.7	4	10	90	79	70	57	11.5	.660
Utah	1.4	2.8	5	7	93	87	75	61	16.3	.707
Southwest	0.9	1.8	3	6	94	86	77	60	18.7	.716
United States	1.7	3.4	6	12	88	74	62	44	11.8	.566

Sources: (a) 1964 Wheat Program: Frequency Distribution. USDA, ASCS, October 1965, tables 6 and 8, pp. 7, 9.

(b) Agricultural Statistics, 1966. USDA, 1966, p. 3. Prices from this source were used in computing the weights used in combining the distributional data from source (a).

(c) Crop Production: 1965 Annual Summary. USDA, SRS, December 20, 1965, p. 60. Yield data from this source was used along with prices from (b) and State allotment totals for program participators from (a) in computing State allotment output value figures for use as weights in combining the distributional data from source (a).

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 5.—*Distribution of 1964 wheat certificate payments: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Colorado	1.2	3.9	9	16	84	71	56	37	8.7	.508
Kansas	1.2	3.6	10	21	79	68	52	37	8.1	.467
Montana	1.2	4.3	8	18	82	68	51	33	7.2	.467
Nebraska	2.4	4.8	11	19	81	63	49	38	9.1	.442
New Mexico	0.7	3.0	7	16	84	71	53	37	7.7	.507
North Dakota	2.0	7.0	15	25	75	61	43	29	5.6	.369
Oklahoma	1.3	3.6	12	24	76	63	49	32	6.8	.421
South Dakota	1.2	3.5	9	19	81	71	55	40	9.2	.499
Texas	0.9	2.3	6	15	85	75	59	41	9.5	.550
Wyoming	1.5	4.4	11	18	82	69	54	36	7.1	.479
Great Plains	1.2	3.6	10	20	80	69	53	37	8.2	.477
Idaho	2.2	4.5	7	14	86	73	62	43	9.3	.546
Oregon	0.7	1.6	4	10	90	80	64	43	9.1	.610
Washington	0.7	2.7	7	16	84	71	53	34	6.5	.502
Northwest	1.2	2.3	5	12	88	80	64	43	9.7	.594
Illinois	5.0	10.0	17	27	73	58	44	24	6.3	.326
Indiana	5.4	10.7	18	27	73	57	43	25	5.7	.316
Iowa	3.8	7.6	13	22	78	65	45	27	5.8	.395
Michigan	5.6	11.2	19	28	72	57	42	27	4.6	.314
Minnesota	3.5	6.9	12	17	83	75	61	43	12.4	.524
Missouri	4.7	9.4	16	23	77	62	49	28	7.6	.376
Ohio	5.2	10.4	17	26	74	58	44	26	5.9	.329
Wisconsin	7.4	14.7	25	37	63	51	41	29	6.6	.238
North Central	4.8	9.6	16	24	76	61	49	29	7.9	.373
Alabama	2.7	5.4	9	16	84	71	53	39	9.1	.494
Arkansas	2.0	4.0	7	10	90	84	70	57	20.3	.658
Florida	3.8	7.5	13	21	79	69	49	32	8.8	.433
Georgia	4.0	8.1	13	20	80	73	61	42	11.7	.496
Kentucky	3.7	7.5	12	22	78	64	47	27	7.2	.403
Louisiana	1.1	2.4	5	13	87	76	60	41	12.0	.572
Maryland	3.4	6.8	15	28	72	59	37	20	5.1	.317
Mississippi	1.3	2.6	6	18	82	68	57	40	10.1	.515
North Carolina	7.5	14.9	25	37	63	50	40	29	5.6	.229
South Carolina	5.4	10.8	18	27	73	64	55	41	10.6	.399
Tennessee	4.5	9.1	15	23	77	65	50	31	8.8	.402
Virginia	6.0	11.9	20	30	70	60	50	34	5.9	.342
West Virginia	5.3	10.6	18	27	73	65	47	31	4.2	.360
South	4.6	9.2	15	23	77	69	56	39	11.7	.444
Delaware	3.2	6.4	14	26	74	58	36	20	5.3	.327
Maine	2.2	4.3	7	11	89	59	36	18	1.8	.392
Massachusetts	7.5	14.9	25	37	63	50	35	18	1.8	.190
New Jersey	3.1	6.2	10	21	79	67	46	29	4.9	.423
New York	4.3	8.7	14	22	78	62	49	27	6.8	.383
Pennsylvania	6.3	12.5	21	31	69	58	43	28	5.0	.299
Northeast	4.8	9.7	16	24	76	64	48	31	6.8	.384
Arizona	1.4	4.3	10	22	78	66	52	36	6.6	.452
California	1.5	4.1	9	16	84	72	57	39	7.5	.514
Nevada	0.8	1.7	6	15	85	77	67	58	9.7	.618
Utah	2.4	4.9	8	12	88	78	65	51	12.6	.594
Southwest	1.5	2.9	5	10	90	79	68	50	13.0	.624
United States	1.7	3.3	7	15	85	72	61	42	10.6	.544

Source: 1964 Wheat Program: Frequency Distribution. USDA, ASCS, October 1965, tables 12 and 15, pp. 13, 16. In the case of certificate payments the distributions are self-weighting since the distributional data is in dollar form.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 6.—*Distribution of 1964 wheat diversion payments: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Colorado	1.9	4.4	10	17	83	71	57	39	9.5	.509
Kansas	1.5	3.9	10	21	79	69	53	37	9.0	.472
Montana	1.9	5.4	10	20	80	66	49	31	6.8	.438
Nebraska	3.2	6.4	13	21	79	61	46	36	8.4	.407
New Mexico	1.4	3.3	8	15	85	72	55	37	7.5	.511
North Dakota	2.3	7.3	16	26	74	60	43	29	5.5	.361
Oklahoma	1.7	4.1	12	24	76	64	51	34	7.8	.430
South Dakota	1.8	4.4	10	20	80	69	54	39	8.9	.482
Texas	1.3	2.9	7	15	85	76	60	42	10.4	.555
Wyoming	2.1	5.1	12	20	80	68	52	35	6.8	.458
Great Plains	1.7	4.2	10	21	79	69	53	37	8.5	.470
Idaho	2.7	5.3	9	16	84	72	61	43	9.7	.527
Oregon	1.8	3.6	7	13	87	78	63	42	9.1	.571
Washington	1.3	3.2	8	16	84	71	53	35	6.6	.495
Northwest	1.7	3.4	6	13	87	78	63	43	9.7	.575
Illinois	5.5	11.0	18	29	71	56	42	23	6.0	.300
Indiana	6.7	13.4	22	33	67	52	39	23	5.0	.242
Iowa	4.3	8.7	14	24	76	63	44	27	5.9	.375
Michigan	8.9	17.8	30	45	55	41	28	18	2.7	.094
Minnesota	4.4	8.7	15	22	78	69	56	39	11.2	.457
Missouri	7.4	14.8	25	37	63	50	38	23	5.9	.209
Ohio	7.7	15.3	26	38	62	47	34	21	4.5	.182
Wisconsin	8.8	17.6	29	44	56	41	30	20	3.5	.111
North Central	7.1	14.2	24	36	64	51	39	24	6.3	.229
Alabama	7.2	14.3	24	36	64	52	41	27	6.4	.244
Arkansas	4.2	8.4	14	21	79	72	61	50	17.7	.507
Florida	8.2	16.4	27	41	59	45	30	17	3.6	.136
Georgia	8.5	17.0	28	43	57	43	32	23	4.5	.137
Kentucky	7.6	15.2	25	38	62	48	36	20	5.1	.186
Louisiana	3.2	6.3	10	17	83	72	57	39	10.6	.500
Maryland	7.7	15.5	26	38	62	49	32	18	4.7	.171
Mississippi	3.3	6.6	11	21	79	64	52	38	10.3	.447
North Carolina	9.2	18.5	31	46	54	38	26	17	3.0	.073
South Carolina	8.9	17.8	30	44	56	41	29	20	3.7	.105
Tennessee	8.0	16.0	27	40	60	47	33	22	4.7	.165
Virginia	8.7	17.4	29	43	57	42	30	19	3.2	.117
West Virginia	7.9	15.7	26	39	61	48	34	20	2.5	.171
South	8.5	17.0	28	43	57	43	32	21	4.9	.135
Delaware	4.1	8.2	16	28	72	57	36	20	5.0	.301
Maine	6.8	13.6	23	34	66	55	45	35	3.5	.282
Massachusetts	2.0	3.9	7	10	90	74	44	22	2.2	.482
New Jersey	8.1	16.2	27	41	59	45	32	19	3.5	.154
New York	8.5	17.0	28	43	57	43	29	18	3.2	.120
Pennsylvania	9.0	18.1	30	45	55	40	28	16	2.9	.085
Northeast	8.5	17.0	28	42	58	43	30	19	3.4	.126
Arizona	3.6	7.1	12	21	79	68	59	44	19.1	.489
California	2.3	4.7	9	17	83	74	60	41	10.2	.527
Nevada	2.1	4.2	8	17	83	73	64	52	13.6	.568
Utah	4.2	8.4	14	21	79	68	56	43	11.1	.466
Southwest	2.5	4.9	8	14	86	76	66	49	16.0	.578
United States	3.4	6.9	11	18	82	68	57	40	10.8	.480

Source: 1964 Wheat Program: Frequency Distribution. USDA, ASCS. October 1965, tables 6 and 10, pp. 7, 11. In the case of diversion payments the distributions are self-weighting since the distributional data is in dollar form.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 7.—*Distribution of total 1964 wheat (certificate and diversion) payments: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Colorado	0.9	3.1	8	15	85	72	57	39	9.0	.525
Kansas	1.2	3.5	10	21	79	68	52	37	8.2	.471
Montana	1.0	3.9	8	18	82	69	52	33	7.2	.480
Nebraska	2.4	4.7	10	19	81	63	49	38	9.1	.447
New Mexico	0.5	1.8	6	13	87	73	56	39	8.3	.538
North Dakota	1.9	6.8	15	25	75	61	43	29	5.7	.373
Oklahoma	1.2	3.4	11	24	76	64	50	33	7.0	.429
South Dakota	1.2	3.3	9	19	81	71	56	40	9.4	.506
Texas	0.8	2.0	6	14	86	77	60	42	9.8	.562
Wyoming	1.3	3.8	10	18	82	70	54	37	7.3	.493
Great Plains	1.2	3.4	9	20	80	69	53	38	8.4	.484
Idaho	2.2	4.3	7	14	86	74	63	44	9.6	.555
Oregon	0.6	1.3	3	8	92	84	68	46	10.1	.644
Washington	0.5	1.8	6	14	86	72	55	35	6.8	.520
Northwest	1.1	2.2	4	11	89	81	65	44	9.9	.610
Illinois	4.9	9.9	16	26	74	58	44	24	6.4	.332
Indiana	5.2	10.4	17	26	74	59	44	27	5.8	.335
Iowa	3.6	7.2	12	21	79	66	46	28	6.0	.412
Michigan	5.3	10.7	18	27	73	64	46	32	5.1	.358
Minnesota	3.4	6.9	11	17	83	75	62	43	12.8	.530
Missouri	4.5	9.0	15	23	77	65	51	31	8.3	.406
Ohio	5.0	10.0	17	25	75	61	45	29	6.1	.356
Wisconsin	7.3	14.5	24	36	64	52	42	33	7.7	.254
North Central	4.6	9.2	15	23	77	64	50	31	8.5	.397
Alabama	2.7	5.3	9	13	87	82	74	53	13.7	.630
Arkansas	2.0	4.0	7	10	90	86	73	60	22.0	.679
Florida	3.8	7.7	13	19	81	73	60	39	13.7	.494
Georgia	5.0	10.1	17	25	75	66	60	53	16.4	.465
Kentucky	3.4	6.8	11	17	83	71	56	33	9.1	.477
Louisiana	1.1	2.2	5	12	88	77	61	43	12.2	.584
Maryland	3.1	6.3	11	25	75	61	40	22	5.5	.356
Mississippi	1.1	2.3	4	13	87	72	59	43	11.3	.563
North Carolina	7.7	15.5	26	39	61	48	38	30	7.2	.214
South Carolina	6.2	12.3	21	31	69	59	51	45	12.5	.365
Tennessee	4.4	8.8	15	22	78	71	57	41	9.9	.456
Virginia	6.1	12.3	20	31	69	59	51	37	6.8	.344
West Virginia	5.4	10.7	18	27	73	64	52	33	4.7	.377
South	4.9	9.9	16	25	75	67	61	46	13.3	.455
Delaware	3.2	6.4	14	26	74	59	37	20	5.3	.330
Maine	2.0	4.1	7	10	90	86	84	74	7.4	.708
Massachusetts	7.3	14.7	24	37	63	47	28	14	1.4	.160
New Jersey	3.0	5.9	10	15	85	72	56	34	6.3	.497
New York	4.3	8.6	14	22	78	71	55	37	7.4	.448
Pennsylvania	6.3	12.5	21	31	69	58	49	31	5.8	.318
Northeast	4.9	9.7	16	24	76	68	53	38	7.4	.418
Arizona	1.2	2.4	6	16	84	70	58	39	7.6	.528
California	0.9	2.0	5	13	87	79	65	45	9.9	.596
Nevada	0.7	1.4	3	8	92	81	72	61	13.4	.688
Utah	2.4	4.8	8	12	88	80	67	53	13.7	.609
Southwest	1.4	2.8	5	9	91	81	71	54	15.0	.652
United States	1.5	2.9	5	11	89	74	63	44	11.6	.577

Source: 1964 Wheat Program: Frequency Distribution. USDA, ASCS, October 1965, tables 6 and 17, pp. 7. 18. In the case of payments (certificate and diversion) the distributions are self-weighting since distributional data is in dollar form.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

In table 8 both certificate and diversion payments are combined into a total 1964 wheat program distribution. Again, the same general regional pattern of distribution and concentration can be perceived, but the concentration ratios are generally higher than any of the components.

TABLE 8.—*Distribution of total 1964 wheat benefits, price supports, and total payments: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries*[1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Colorado	0.8	3.0	8	15	85	72	57	39	9.0	.526
Kansas	1.2	3.5	10	21	79	68	52	37	8.2	.470
Montana	0.9	3.8	8	18	82	69	52	33	7.2	.479
Nebraska	2.4	4.7	10	19	81	63	49	38	9.1	.447
New Mexico	0.5	1.8	6	13	87	74	57	39	8.4	.544
North Dakota	1.9	6.8	15	25	75	61	44	29	5.7	.375
Oklahoma	1.2	3.4	11	24	76	64	50	33	7.0	.429
South Dakota	1.2	3.4	9	19	81	71	55	40	9.2	.501
Texas	0.8	2.1	6	14	86	77	60	42	9.9	.564
Wyoming	1.3	3.8	10	18	82	70	54	37	7.3	.489
Great Plains	1.2	3.4	9	20	80	69	53	38	8.4	.483
Idaho	2.0	4.0	7	13	87	76	65	46	10.4	.577
Oregon	0.6	1.3	3	8	92	84	69	47	10.3	.646
Washington	0.5	1.8	6	14	86	73	55	36	7.1	.526
Northwest	1.0	2.0	4	10	90	82	66	45	10.3	.619
Illinois	4.9	9.9	16	26	74	58	44	24	6.4	.331
Indiana	5.2	10.4	17	26	74	58	44	26	5.7	.332
Iowa	3.6	7.3	12	21	79	66	46	28	6.1	.412
Michigan	5.5	11.0	18	28	72	63	45	31	5.0	.345
Minnesota	3.5	7.0	12	18	82	75	62	43	12.6	.524
Missouri	4.6	9.2	15	23	77	65	51	30	8.2	.400
Ohio	5.1	10.1	17	25	75	60	45	28	6.0	.352
Wisconsin	7.3	14.6	24	37	63	51	41	33	7.4	.248
North Central	4.7	9.4	16	23	77	64	50	31	8.4	.392
Alabama	2.8	5.6	9	14	86	81	73	53	13.6	.619
Arkansas	2.1	4.2	7	11	89	85	73	59	21.5	.669
Florida	4.0	7.9	13	20	80	73	59	38	12.4	.482
Georgia	5.2	10.5	17	26	74	65	58	51	15.3	.444
Kentucky	3.6	7.1	12	18	82	70	55	33	8.8	.466
Louisiana	1.1	2.3	5	12	88	77	61	42	11.9	.579
Maryland	3.2	6.4	12	25	75	61	39	22	5.5	.351
Mississippi	1.2	2.4	4	13	87	71	59	43	10.8	.560
North Carolina	7.8	15.5	26	39	61	48	38	30	7.2	.213
South Carolina	6.3	12.6	21	32	68	58	49	43	11.7	.348
Tennessee	4.6	9.1	15	23	77	70	56	40	9.4	.444
Virginia	6.2	12.5	21	31	69	58	50	36	6.7	.336
West Virginia	5.4	10.8	18	27	73	64	52	33	4.7	.373
South	5.0	10.1	17	25	75	66	60	46	13.0	.447
Delaware	3.3	6.6	14	26	74	58	36	20	5.3	.325
Maine	2.1	4.3	7	11	89	86	83	73	7.3	.699
Massachusetts	7.1	14.2	24	35	65	48	29	14	1.4	.174
New Jersey	3.1	6.2	10	15	85	71	55	34	6.2	.488
New York	4.5	8.9	15	22	78	70	54	36	7.1	.435
Pennsylvania	6.4	12.7	21	32	68	58	48	30	5.7	.309
Northeast	5.0	10.0	17	25	75	67	53	37	7.2	.407
Arizona	1.2	2.4	6	16	84	71	59	41	9.8	.536
California	0.8	1.8	5	12	88	81	67	47	11.4	.617
Nevada	0.7	1.5	3	9	91	81	72	60	12.9	.680
Utah	2.1	4.2	7	11	89	82	69	55	14.5	.637
Southwest	1.3	2.5	4	8	92	83	73	56	16.1	.672
United States	1.5	3.0	5	11	89	74	63	44	11.7	.578

Source: See sources for tables 4, 5 and 6. This table combines the price-support benefits, the certificate payments, and diversion payments reported in tables 4, 5 and 6.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

Just as in the case of rice, the same general degree of concentration can represent quite different distributions of benefits by allotment size. Farmers with allotments of 200 acres or less receive 97 percent of all benefits in the North Central region, 61 percent in the Great Plains, and only 34 percent in the Northwest. Farmers with allotments of 1,000 acres or more receive only 0.1 percent of all benefits in the North Central region, they receive 3 percent in the Great Plains, and 11 percent in the far Northwest (see table 9). Variation between States is considerable.

The average U.S. Gini ratio for wheat price supports is .566, for wheat certificate payments is .544, and for wheat diversion payments is .480. These statistics, of course, refer to distributions among program cooperators. But, in an industry in which a quarter of the producers choose not to participate in a price and income support program, it is relevant to ask how the nonparticipating allotment holders differ from those in the program. While the distributions are not presented in tabular form, Lorenz curves and Gini ratios were computed on allotment acreages of nonparticipating allotment holders with interesting results.[15]

Using the same type of value weighting system as we did for price supports, we find that over the whole of the United States, wheat allotments held by farmers outside the program exhibit a concentration ratio of .355—well below the .566 for price-support program cooperators. The concentration ratios of the regions for nonparticipating farmers generally follow the pattern previously observed for those in the program: the Northwest had a Gini of .693, the Great Plains one of .573, and the North Central region is .202. In other words, allotment concentration among nonparticipating farmers is greater in the Northwest and Great Plains than among farms in the program in those regions. In all other regions and for the United States, concentration is lower among nonparticipating farmers than those in the program.

Clearly it is the smaller allotment holder who is the typical noncooperator. Less than 1 percent of noncooperators hold allotments of more than 100 acres; less than 5 percent hold allotments of more than 30 acres. Among program cooperators, 99 percent of farmers hold allotments of 100 acres or better. Thus, not only is concentration on the whole lower, but the average size of wheat allotment is far smaller among those wheat farmers who chose in 1964 not to participate in the wheat program.[16] This suggests that if concentration were measured over all allotment holders, program participators and nonparticipators, the measure of benefit concentration in wheat would be greater than that reported here for program participators.

The interesting general conclusion suggested by this analysis of the 1964 wheat program is that the combination of direct payments (as designed) with price supports results in an even greater concentration of the distribution of benefits from the wheat program than results from price supports alone.

The Feed Grain Program

The feed grain program is very similar to that of wheat, for the wheat program was designed in part with the feed grain program as its model. The primary difference is that in feed grains there is a price-support payment in place of the wheat certificate payment. Thus, in feed grains there are three types of program benefit streams: price supports, price-support payments, and diversion payments.

We have feed grain program distributional data for the 1964 crop year, just as in wheat. The same type of data is available for computing price-support benefit distributions as well as diversion payments. Distributions of price-support payments by acreage allotments are not available. However, it is possible to construct such a distribution using data (from another source) on the distribution of total feed grain price-support payments by State (*14*) combined with the distribution of planted acreage by allotment size on participating farms. The necessary assumption is that price-support payments are distributed between allotment size groups within a State in the same proportion as planted acreage on participating farms. This is a perfectly valid assumption in this case since price-support payments are made on each bushel produced on participating farms and should exhibit distributions and a degree of concentration identical to that of benefits from price supports.

There is a difference from wheat also in the procedure for estimating the distribution of price-support benefits. In the case of feed grains, actual planted acreage distributions are available by allotment size group by State. This avoids problems of failure to plant and crop failure, which one is involved with when only a distribution of allotment acreage is available (as in wheat).

The weights for feed grains also had to be computed in a different and less satisfactory fashion. Season average prices by State are available only for the components of feed grains: corn, oats, barley, and grain sorghum. Allotment data are available by State, only for total feed grains—not by corn, oats, barley, or grain sorghums. Consequently, one is forced to use a value of total feed grain production as State value weights for aggregation purposes.

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[15] The data came from the same source as the rest of the wheat program distributions. See source (a) of table 4. The data came from tables 4 and 5 of the source.

[16] One must be careful in interpreting this. Because a nonparticipating farmer has a small allotment does not mean he planted wheat acreage equal to his allotment. He may have planted far more—or none at all. Also, the farmer who holds a small wheat allotment may not be a small farmer, wheat may just be a minor enterprise on his farm. All we have done here is compare distributions of allotment size.

TABLE 9.—*Distribution of total 1964 wheat benefits, price supports, and total payments: Proportion of U.S., regional, and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Percent of total benefits accruing to farmers with allotments—								
	15 acres and under	30 acres and under	100 acres and under	200 acres and under	300 acres and under	Over 300 acres	Over 500 acres	Over 1,000 acres	Over 2,000 acres
Colorado	1	2	17	37	53	47	26	8.3	2.2
Kansas	1	5	35	64	79	21	8	1.7	0.3
Montana	0	1	10	27	45	55	28	7.0	1.3
Nebraska	5	18	63	83	92	8	3	0.7	0.0
New Mexico	1	1	10	27	41	59	39	16.6	4.2
North Dakota	0	3	32	69	85	15	5	0.7	0.1
Oklahoma	2	5	44	71	85	15	5	1.0	0.2
South Dakota	2	5	34	62	77	23	9	2.4	0.7
Texas	1	4	23	44	59	41	22	8.0	2.4
Wyoming	0	3	24	51	68	32	15	3.7	1.4
Great Plains	1	5	33	61	76	24	11	2.9	0.6
Idaho	6	12	32	51	65	35	19	6.1	1.5
Oregon	2	4	15	30	43	57	36	13.1	3.0
Washington	5	2	9	25	41	59	35	12.4	2.0
Northwest	2	5	17	34	49	51	31	10.7	2.4
Illinois	23	53	93	98	99	1	0	0.0	0.0
Indiana	29	61	95	99	100	0	0	0.0	0.0
Iowa	15	37	83	96	99	1	0	0.0	0.0
Michigan	40	71	97	100	100	0	0	0.0	0.0
Minnesota	23	34	68	86	93	7	3	0.8	0.4
Missouri	28	52	90	97	99	1	0	0.0	0.0
Ohio	30	63	95	99	99	1	0	0.0	0.0
Wisconsin	66	83	97	100	100	0	0	0.0	0.0
North Central	28	55	90	97	98	2	1	0.1	0.1
Alabama	23	35	67	90	93	7	0	0.0	0.0
Arkansas	15	20	45	65	76	24	12	12.1	0.0
Florida	27	46	89	93	100	0	0	0.0	0.0
Georgia	50	64	89	95	99	1	1	0.0	0.0
Kentucky	22	49	90	98	99	1	0	0.0	0.0
Louisiana	3	8	28	55	74	26	10	10.3	0.0
Maryland	11	42	95	99	99	1	0	0.0	0.0
Mississippi	4	9	46	68	74	26	9	0.0	0.0
North Carolina	72	87	98	100	100	0	0	0.0	0.0
South Carolina	61	74	95	99	100	0	0	0.0	0.0
Tennessee	35	62	93	98	99	1	0	0.0	0.0
Virginia	54	75	97	99	100	0	0	0.0	0.0
West Virginia	42	72	98	100	100	0	0	0.0	0.0
South	45	63	90	96	98	2	1	0.5	0.0
Delaware	9	36	95	100	100	0	0	0.0	0.0
Maine	21	21	100	100	100	0	0	0.0	0.0
Massachusetts	40	100	100	100	100	0	0	0.0	0.0
New Jersey	18	39	81	99	100	0	0	0.0	0.0
New York	33	60	95	99	100	0	0	0.0	0.0
Pennsylvania	52	81	98	100	100	0	0	0.0	0.0
Northeast	38	66	95	99	100	0	0	0.0	0.0
Arizona	3	9	39	61	79	21	16	8.4	0.0
California	1	3	16	27	38	62	46	27.0	13.4
Nevada	2	5	28	46	51	49	45	26.1	0.0
Utah	9	15	33	49	61	39	24	8.6	1.4
Southwest	4	8	24	39	50	50	36	18.7	7.5
United States	5	12	39	62	75	25	12	3.6	0.8

Source: See source (a) for tables 4, 5 and 6. This table combines the price-support benefits, the certificate payments, and diversion payments reported in tables 4, 5 and 6.

The weight for a State is an aggregate of the products of State average price and production data on corn, oats, barley, and grain sorghums. It is possible that this introduces some distortion into the relative relationship of the value weights if the proportion of nonparticipating farmers and acreage outside the program varies greatly between allotment size classes. As noted earlier, experiments using various weighting systems indicate that the Lorenz curves are not very sensitive to changes in the weights. Nevertheless, it would have been better to be able to use a wheat type of weighting system.

As with wheat, we have the opportunity in this analysis to observe the impact on the concentration of benefit distribution that results when direct payments are combined with price supports.

The Gini concentration ratios for all of the Lorenz curves computed for feed grains can be seen in summary form in table 10. The pattern is utterly consistent, for every State, every region, and for the United States. The degree of concentration of diversion payment distributions is well below that for price support benefits. The concentration ratio for the combined or total program benefit distributions falls consistently between that for diversion payments and that of price-support benefits.[17] In contrast to the results in wheat, the diversion payments in feed grains tend to reduce the concentration of overall program benefits, though perhaps not by as much as one might expect for the volume of diversion payments that are involved in the feed grain program.

Price-support benefit Lorenz curve computations are presented in table 11. Similar presentations for diversion payments are found in table 12 and for total program benefits in table 13. The lower half of farmers receive only 8 percent of all price-support benefits, but 24 percent of all diversion payments. The top 10 percent of farmers receive 37 percent of all price-support benefits and 30 percent of all diversion payments. There is considerable variation by State and region, but the variance is far greater in the case of price-support benefits than diversion payments—which is reflected in the lower concentration ratios for diversion payments.

Again, looking at the distribution of benefits by allotment size groups (in table 14) one sees a varied picture. Nationally, half of all program benefits go to producers with allotments of 100 acres or less. This is also true of the North Central and South Central regions. But in the Western States only 14 percent of the benefits go to farmers with allotments of 100 acres or less, and in the North Atlantic region these farmers receive 83 percent of all benefits.

Nationally, 6 percent of all feed grain program benefits go to farmers with allotments of 500 acres

TABLE 10.—*1964 feed grain program benefits: Summary of Gini concentration ratios for the United States, region, and State for 1964* [1]

State	Price-support benefits	Diversion payments	Total benefits
Connecticut	.826	.296	.595
Maine	.701	.295	.690
Massachusetts	.778	.340	.340
New Jersey	.746	.348	.635
New York	.761	.355	.691
Pennsylvania	.757	.368	.717
Vermont	.782	.261	.702
North Atlantic	.740	.375	.691
Illinois	.476	.332	.466
Indiana	.673	.368	.638
Iowa	.363	.304	.356
Kansas	.514	.369	.481
Michigan	.745	.368	.691
Minnesota	.458	.307	.439
Missouri	.662	.399	.601
Nebraska	.362	.341	.359
North Dakota	.444	.362	.434
Ohio	.717	.367	.674
South Dakota	.394	.330	.386
Wisconsin	.615	.342	.577
North Central	.477	.327	.459
Delaware	.696	.381	.663
Florida	.667	.450	.622
Georgia	.713	.479	.677
Maryland	.765	.413	.740
North Carolina	.752	.449	.706
South Carolina	.726	.459	.681
Virginia	.746	.430	.700
West Virginia	.860	.396	.779
South Atlantic	.741	.467	.701
Alabama	.763	.396	.699
Arkansas	.827	.427	.734
Kentucky	.801	.399	.713
Louisiana	.743	.484	.682
Mississippi	.717	.440	.664
Oklahoma	.693	.341	.611
Tennessee	.772	.390	.692
Texas	.647	.517	.621
South Central	.723	.479	.677
Arizona	.688	.595	.680
California	.749	.616	.740
Colorado	.559	.385	.518
Idaho	.723	.375	.703
Montana	.558	.405	.545
Nevada	.748	.366	.731
New Mexico	.506	.465	.532
Oregon	.762	.446	.736
Utah	.670	.341	.627
Washington	.639	.352	.617
Wyoming	.574	.319	.550
Western	.704	.505	.681
United States	.588	.405	.565

Sources: Tables 11, 12, and 13.

[1] For an explanation of the Gini concentration ratio see section on procedure in this paper.

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[17] Price-support payment Lorenz curves and Gini ratios were computed in the manner described earlier. These are identical to those for price-support benefits, and are not presented separately. The total benefit computations of table 10 include price-support payments.

TABLE 11.—*Distribution of 1964 feed grain price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Connecticut	0.6	1.2	2.0	3.0	97	96	90	73	30	.826
Maine	1.4	2.9	4.8	7.1	93	90	80	58	0	.701
Massachusetts	0.2	0.3	0.6	1.1	99	95	80	65	9	.778
New Jersey	0.1	0.1	0.4	1.9	98	92	79	53	14	.746
New York	0.4	0.8	1.3	2.9	97	91	82	60	15	.761
Pennsylvania	0.7	1.4	2.3	3.9	96	90	81	63	21	.757
Vermont	0.3	0.7	1.1	3.3	97	91	77	71	24	.782
North Atlantic	0.6	1.2	2.1	4.1	96	89	79	58	17	.740
Illinois	0.2	1.1	5.7	15.9	84	65	50	29	7	.476
Indiana	0.1	0.2	0.9	3.9	96	85	66	47	12	.673
Iowa	0.6	4.2	11.0	26.5	73	58	41	24	5	.363
Kansas	0.3	1.4	6.1	16.1	84	70	53	36	9	.514
Michigan	0.1	0.3	0.9	2.9	97	92	77	55	13	.745
Minnesota	0.2	1.2	6.4	18.5	82	64	48	29	6	.458
Missouri	0.1	0.2	1.0	4.7	95	85	65	46	12	.662
Nebraska	1.2	4.7	13.6	25.9	74	59	41	27	5	.362
North Dakota	0.4	2.8	9.0	19.7	80	64	47	31	6	.444
Ohio	0.2	0.3	0.9	3.3	97	90	73	50	13	.717
South Dakota	0.7	3.9	11.6	23.4	77	61	43	29	6	.394
Wisconsin	0.3	0.6	2.3	7.6	92	80	63	39	9	.614
North Central	0.1	0.9	4.4	14.9	85	65	49	29	6	.477
Delaware	0.1	0.4	1.2	3.6	96	86	71	51	10	.696
Florida	0.1	0.3	1.2	5.4	95	84	67	46	12	.667
Georgia	0.2	0.4	1.1	3.0	97	89	72	53	13	.713
Maryland	0.2	0.3	0.9	2.4	98	94	82	59	14	.765
North Carolina	1.0	2.0	3.3	4.9	95	90	81	65	20	.752
South Carolina	0.8	1.6	2.7	5.3	95	88	78	60	17	.726
Virginia	1.3	2.5	4.2	6.3	94	89	81	67	21	.746
West Virginia	0.8	1.7	2.8	4.2	96	94	93	87	32	.860
South Atlantic	0.7	1.4	2.4	4.4	96	90	80	60	16	.741
Alabama	0.3	0.7	1.2	3.7	96	92	81	62	18	.763
Arkansas	0.5	1.0	1.7	3.2	97	93	88	75	33	.827
Kentucky	0.4	0.8	1.4	2.7	97	93	87	68	21	.801
Louisiana	1.1	2.2	3.7	6.0	94	88	81	65	23	.743
Mississippi	0.9	1.8	2.9	6.6	93	87	78	60	17	.717
Oklahoma	0.0	0.2	0.8	5.3	95	86	69	52	17	.693
Tennessee	0.6	1.1	1.8	3.7	96	91	84	64	18	.772
Texas	0.0	0.2	1.3	6.8	93	82	64	46	9	.647
South Central	0.3	0.7	1.4	3.9	96	90	75	55	14	.723
Arizona	0.0	0.1	1.3	4.8	95	86	73	54	6	.688
California	0.0	0.0	0.3	2.2	98	92	82	54	5	749
Colorado	0.1	0.8	3.7	12.9	87	74	58	39	6	.559
Idaho	0.1	0.2	0.9	4.2	96	87	75	56	16	.723
Montana	0.1	1.1	4.6	11.6	88	73	58	40	6	.558
Nevada	0.0	0.0	0.0	3.4	97	88	74	61	17	.748
New Mexico	0.0	0.5	3.5	10.8	89	75	57	36	4	.560
Oregon	0.0	0.1	0.5	1.9	98	91	80	60	14	.762
Utah	0.3	0.7	2.2	6.5	93	86	70	47	12	.670
Washington	0.0	0.2	0.8	5.8	94	82	63	43	9	.639
Wyoming	0.0	0.5	2.5	9.8	90	74	58	37	8	.574
Western	0.1	0.4	1.8	6.7	93	85	73	58	11	.704
United States	0.2	0.5	1.9	7.8	92	76	57	37	9	.588

Sources: (a) 1964 Feed Grain Program: Frequency Distribution. USDA, ASCS, July 1965, tables 2 and 12.

(b) For computing the weights used in combining the State distributional data of source (a), price and production figures for corn, oats, barley, and grain sorghums were obtained from Agricultural Statistics, 1966, USDA, 1966, tables 40, 52, 61, and 72.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 12.—*Distribution of 1964 feed grain diversion payments: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Connecticut	5.3	10.6	18	26	74	56	38	22	5.3	.296
Maine	6.1	12.1	20	30	70	59	42	26	3.8	.295
Massachusetts	4.7	9.3	16	24	76	58	41	25	7.7	.340
New Hampshire	7.9	15.8	26	43	57	38	24	4	0.4	.067
New Jersey	2.9	5.8	13	26	74	56	41	26	5.8	.348
New York	4.3	8.6	14	24	76	60	42	26	6.0	.355
Pennsylvania	4.3	8.7	14	23	77	61	43	27	7.5	.368
Rhode Island	5.9	12.9	26	41	59	43	26	13	1.3	.126
Vermont	5.5	11.1	18	30	70	54	36	18	2.3	.261
North Atlantic	4.1	8.2	14	23	77	61	44	27	6.9	.375
Illinois	2.8	8.1	17	28	72	56	44	27	6.6	.332
Indiana	2.6	5.4	13	27	73	58	43	30	7.7	.368
Iowa	3.9	9.2	17	31	69	56	40	24	5.5	.304
Kansas	3.1	7.9	15	26	74	60	45	30	6.4	.369
Michigan	3.1	6.1	12	24	76	58	42	27	6.3	.368
Minnesota	2.9	8.7	17	30	70	55	41	24	5.3	.307
Missouri	2.1	5.3	12	25	75	62	46	32	8.5	.399
Nebraska	3.2	7.3	16	27	73	58	41	28	5.8	.341
North Dakota	3.1	7.3	14	25	75	59	43	29	5.8	.362
Ohio	3.1	6.3	12	25	75	58	42	28	7.3	.367
South Dakota	3.6	8.1	16	28	72	57	40	28	5.5	.330
Wisconsin	3.1	6.3	14	27	73	56	42	27	6.3	.342
North Central	2.4	7.5	17	28	72	56	43	26	5.7	.327
Delaware	2.5	6.2	13	26	74	59	46	33	6.3	.381
Florida	1.8	4.8	11	22	78	66	52	36	9.0	.450
Georgia	2.1	4.1	9	19	81	67	52	38	9.3	.479
Maryland	2.8	5.6	11	22	78	62	47	33	7.7	.413
North Carolina	3.8	7.5	13	19	81	68	51	34	9.2	.449
South Carolina	3.2	6.4	11	18	82	68	51	34	9.4	.459
Virginia	4.3	8.6	14	22	78	68	52	34	8.7	.430
West Virginia	5.5	10.9	18	27	73	64	56	39	9.0	.396
South Atlantic	3.2	6.4	11	18	82	68	51	35	9.9	.467
Alabama	3.3	6.6	11	22	78	61	44	30	8.2	.396
Arkansas	3.8	7.5	13	20	80	65	49	33	11.0	.427
Kentucky	3.8	7.6	13	21	79	63	45	29	7.0	.399
Louisiana	3.2	6.4	11	17	83	70	54	38	11.2	.484
Mississippi	3.4	6.8	11	20	80	66	49	35	10.2	.440
Oklahoma	2.4	7.0	16	29	71	57	42	29	7.3	.341
Tennessee	3.9	7.8	13	22	78	63	45	28	7.1	.390
Texas	1.3	3.9	9	17	83	72	57	41	8.2	.517
South Central	2.6	5.1	9	19	81	67	53	40	11.2	.479
Arizona	0.9	2.8	6	11	89	78	66	49	5.0	.595
California	0.8	2.4	5	10	90	82	69	44	4.4	.616
Colorado	2.6	6.9	13	24	76	61	46	31	4.5	.385
Idaho	2.7	6.4	14	27	73	59	46	32	6.8	.375
Montana	2.6	6.5	13	22	78	62	48	32	4.5	.405
Nevada	2.5	7.0	16	26	74	61	45	29	4.7	.366
New Mexico	1.3	4.2	9	18	82	68	51	33	3.8	.465
Oregon	1.9	4.1	10	21	79	65	51	33	8.0	.446
Utah	3.4	6.9	14	26	74	57	41	26	5.9	.341
Washington	1.8	5.7	14	27	73	58	41	27	4.7	.352
Wyoming	3.1	8.0	17	29	71	56	41	25	5.8	.319
Western	1.5	4.6	10	19	81	70	57	43	7.2	.505
United States	2.2	4.4	11	24	76	61	47	30	7.5	.405

Sources: (a) 1964 Feed Grain Program: Frequency Distribution. USDA, ASCS, July 1965. tables 2 and 6. Diversion payments are self-weighting since the basic distributional data are expressed in dollar value of payments made.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 13.—*Distribution of total 1964 feed grain benefits, price supports, price support payments, diversion payments: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Connecticut	2.6	5.3	8.8	13.2	87	79	68	51	19	.595
Maine	1.5	3.1	5.2	7.7	92	89	79	57	0	.690
Massachusetts	4.7	9.3	15.5	24.1	76	58	41	25	8	.340
New Hampshire	7.9	15.8	26.4	43.5	57	38	24	4	0	.067
New Jersey	0.9	1.7	3.8	8.7	91	82	68	45	12	.635
New York	1.1	2.1	3.5	6.5	93	86	75	54	13	.691
Pennsylvania	1.1	2.1	3.5	5.8	94	87	77	59	20	.717
Rhode Island	5.9	12.9	25.5	41.3	59	43	26	13	1	.126
Vermont	1.1	2.3	3.8	7.4	93	85	71	63	20	.702
North Atlantic	1.1	2.2	3.6	6.6	93	86	74	54	16	.691
Illinois	0.3	1.6	6.4	16.7	83	65	50	29	7	.466
Indiana	0.4	0.8	2.3	6.5	94	82	63	45	11	.638
Iowa	1.0	4.8	11.7	27.0	73	58	41	24	5	.356
Kansas	0.9	2.9	8.2	18.4	82	68	51	35	8	.481
Michigan	0.6	1.1	2.5	6.0	94	88	72	51	12	.691
Minnesota	0.5	2.2	7.8	20.0	80	63	47	28	6	.439
Missouri	0.5	1.4	3.6	9.3	91	79	60	43	11	.601
Nebraska	1.5	5.1	14.0	26.1	74	59	41	27	5	.359
North Dakota	0.7	3.4	9.7	20.4	80	64	46	31	6	.434
Ohio	0.5	1.0	2.3	6.0	94	86	70	48	13	.674
South Dakota	1.0	4.4	12.1	23.9	76	60	42	29	6	.386
Wisconsin	0.7	1.3	3.9	10.3	90	77	60	38	8	.577
North Central	0.4	1.8	5.9	16.5	83	64	48	28	6	.459
Delaware	0.4	1.0	2.5	5.9	94	84	69	49	10	.663
Florida	0.4	1.3	3.2	8.8	91	80	64	44	12	.622
Georgia	0.5	1.0	2.2	5.3	95	85	69	50	12	.677
Maryland	0.3	0.7	1.6	3.8	96	91	80	57	14	.740
North Carolina	1.4	2.8	4.7	7.1	93	86	76	60	18	.706
South Carolina	1.2	2.5	4.1	7.5	93	85	74	56	16	.681
Virginia	1.7	3.4	5.7	8.5	92	86	77	62	19	.700
West Virginia	1.6	3.3	5.5	8.2	92	89	87	79	28	.779
South Atlantic	1.1	2.2	3.6	6.3	94	87	75	56	15	.701
Alabama	0.9	1.7	2.9	6.9	93	87	74	56	16	.699
Arkansas	1.3	2.5	4.2	7.2	93	87	79	66	28	.734
Kentucky	1.2	2.3	3.8	6.7	93	87	78	60	18	.713
Louisiana	1.6	3.2	5.3	8.6	91	84	75	59	20	.682
Mississippi	1.4	2.7	4.5	9.3	91	83	73	55	15	.664
Oklahoma	0.6	1.8	4.3	10.8	89	80	62	47	15	.611
Tennessee	1.3	2.5	4.2	7.5	93	85	76	57	16	.692
Texas	0.3	1.0	2.9	8.8	91	80	63	45	9	.621
South Central	0.8	1.5	2.9	6.9	93	85	71	52	14	.677
Arizona	0.1	0.4	1.7	5.3	95	85	72	54	6	.680
California	0.1	0.2	0.7	2.7	97	92	81	54	5	.740
Colorado	0.7	2.2	6.0	15.6	84	71	55	37	5	.518
Idaho	0.2	0.5	1.6	5.5	95	85	73	54	16	.703
Montana	0.3	1.6	5.3	12.5	87	72	57	39	6	.545
Nevada	0.1	0.3	0.7	4.5	96	86	73	59	17	.731
New Mexico	0.4	1.6	5.1	12.9	87	73	55	35	4	.532
Oregon	0.2	0.4	1.3	3.5	96	89	78	58	14	.736
Utah	0.7	1.5	3.8	9.1	91	82	66	44	11	.627
Washington	0.2	0.6	1.8	7.4	93	81	61	42	8	.617
Wyoming	0.3	1.2	3.9	11.6	88	73	57	36	8	.550
Western	0.2	0.8	2.7	8.0	92	83	71	56	10	.681
United States	0.5	1.0	3.2	9.9	90	75	56	36	9	.565

Footnotes on next page.

Sources: (a) 1964 Feed Grain Program: Frequency Distribution. USDA, ASCS, July 1965, tables 2, 6, and 12.

(b) For computing the weights used in combining the state distributional data of source (a) for price-support benefits, price and production figures for corn, oats, barley, and grain sorghums were obtained from Agricultural Statistics, 1966, USDA, 1966, tables 40, 52, 61, and 72. Diversion payments are self-weighting since the basic distributional data are expressed in dollar value of payments made.

(c) The distributional data source (a) does not contain frequency distributions or any other information on price-support payments. Because of the nature of price-support payments, however, it was possible to estimate a Lorenz curve from the distribution (by allotment size) of acreage planted by farmers participating in the feed grain program (see source (a), table 12) using as weights total 1964 price-support payments by State (from Farm Income, State Estimates, 1949–1965 (supplement to Farm Income Situation 203), USDA, ERS, August 1966, p. 137). This estimate was combined with the Lorenz curves for diversion payments and price-support benefits to produce this table.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 14.—*Distribution of total 1964 feed grain program benefits, price supports, price support payments, diversion payments: Proportion of U.S., regional, and State benefits accruing to farmer beneficiaries with allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of total benefits accruing to farmers with allotments—										
	10 acres and under	15 acres and under	20 acres and under	25 acres and under	30 acres and under	50 acres and under	100 acres and under	Over 100 acres	Over 200 acres	Over 300 acres	Over 500 acres
Connecticut	13.4	22.4	30.4	41	52	73	81	19	0	0.0	0.0
Maine	10.1	25.5	48.4	73	100	100	100	0	0	0.0	0.0
Massachusetts	22.7	40.5	52.4	68	74	84	92	8	0	0.0	0.0
New Hampshire	31.7	55.3	76.4	76	96	100	100	0	0	0.0	0.0
New Jersey	2.1	4.4	7.4	11	15	34	67	33	10	5.5	3.1
New York	4.8	10.7	18.1	25	32	56	83	17	4	1.3	0.3
Pennsylvania	5.1	11.2	18.3	25	32	56	80	20	9	6.7	4.7
Rhode Island	0.0	9.8	57.1	57	57	100	100	0	0	0.0	0.0
Vermont	5.0	13.4	28.9	32	49	71	100	0	0	0.0	0.0
North Atlantic	4.9	10.8	17.9	25	31	55	81	19	8	5.0	3.3
Illinois	0.2	0.5	1.2	2	4	14	51	49	16	6.6	2.2
Indiana	0.7	1.7	3.4	6	8	24	56	44	17	9.2	3.9
Iowa	0.1	0.2	0.6	1	2	10	49	51	14	5.5	1.6
Kansas	0.1	0.5	1.1	2	3	12	38	62	30	17.4	7.3
Michigan	1.6	4.0	7.4	11	16	38	73	27	8	4.1	1.4
Minnesota	0.2	0.6	1.3	2	4	13	48	52	17	7.3	2.2
Missouri	0.8	1.9	3.6	6	8	21	53	47	20	11.0	4.7
Nebraska	0.0	0.1	0.3	1	1	6	35	65	25	10.7	3.3
North Dakota	0.0	0.1	0.3	1	1	5	26	74	37	18.5	5.6
Ohio	1.5	3.5	6.8	11	16	36	68	32	12	6.4	2.3
South Dakota	0.0	0.1	0.3	1	1	6	31	69	29	13.9	4.6
Wisconsin	1.3	4.0	8.0	13	19	44	78	22	6	2.5	0.9
North Central	0.4	1.0	2.1	3	5	16	50	50	18	8.2	2.8
Delaware	0.5	1.5	3.2	5	7	24	52	48	19	8.6	1.7
Florida	0.5	1.4	2.7	4	6	16	42	58	29	19.1	8.7
Georgia	1.3	2.8	4.4	6	8	21	49	51	24	13.0	6.0
Maryland	0.9	2.3	4.0	6	8	21	50	50	24	9.6	3.1
North Carolina	7.7	14.3	20.8	27	32	50	73	27	12	6.7	2.9
South Carolina	5.5	11.1	17.0	22	27	46	71	29	13	7.3	2.7
Virginia	10.3	17.9	24.5	30	35	53	76	24	10	5.2	1.5
West Virginia	13.4	18.7	22.7	28	31	50	78	22	6	2.3	0.0
South Atlantic	5.0	9.3	13.5	17	21	37	62	38	17	9.1	3.7

TABLE 14.—*Distribution of total 1964 feed grain program benefits, price supports, price support payments, diversion payments: Proportion of U.S., regional, and State benefits accruing to farmer beneficiaries with allotments under or over various specified sizes*—Continued

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of total benefits accruing to farmers with allotments—										
	10 acres and under	15 acres and under	20 acres and under	25 acres and under	30 acres and under	50 acres and under	100 acres and under	Over 100 acres	Over 200 acres	Over 300 acres	Over 500 acres
Alabama	2.8	6.6	10.7	15	19	37	66	34	15	8.7	3.1
Arkansas	5.8	11.4	17.0	22	26	42	63	37	24	15.6	8.0
Kentucky	5.3	10.4	15.7	21	26	46	73	27	11	5.7	2.5
Louisiana	7.6	14.5	20.8	26	30	46	66	34	18	8.1	3.3
Mississippi	5.3	11.6	18.2	24	29	47	71	29	14	6.6	3.0
Oklahoma	0.6	1.5	3.0	5	7	19	48	52	27	17.4	9.1
Tennessee	5.7	11.6	17.7	23	29	52	78	22	8	4.6	1.5
Texas	0.3	0.6	1.1	2	2	7	22	78	52	35.3	18.0
South Central	2.4	4.9	7.7	10	13	25	46	54	33	21.4	10.6
Arizona	0.0	0.1	0.1	0	0	1	6	94	83	72.3	53.2
California	0.0	0.1	0.1	0	0	1	3	97	92	85.7	74.8
Colorado	0.2	0.4	0.8	1	2	6	22	78	52	35.6	17.0
Idaho	0.3	0.8	1.5	2	3	9	27	73	51	38.3	24.7
Montana	0.1	0.1	0.3	1	1	3	13	87	62	41.4	23.1
Nevada	0.2	0.2	0.6	1	2	11	32	68	48	31.2	0.0
New Mexico	0.2	0.3	0.6	1	1	3	11	89	68	50.5	28.1
Oregon	0.4	0.8	1.4	2	3	7	21	79	57	38.8	21.0
Utah	1.8	4.8	8.9	13	17	38	68	32	11	6.9	0.0
Washington	0.2	0.4	0.8	1	2	5	22	78	47	28.0	9.5
Wyoming	0.2	0.4	1.0	2	3	12	38	62	28	15.3	4.6
Western	0.2	0.4	0.8	1	2	5	14	86	68	55.4	40.1
United States	1.0	2.2	3.7	5	8	19	49	51	22	12.4	5.9

Sources: (a) 1964 Feed Grain Program: Frequency Distribution. USDA, ASCS, July 1965, tables 2, 6, and 12.

(b) For computing the weights used in combining the state distributional data of source (a) for price-support benefits, price and production figures for corn, oats, barley, and grain sorghums were obtained from Agricultural Statistics, 1966. USDA, 1966, tables 40, 52, 61, and 72. Diversion payments are self-weighting since the basic distributional data are expressed in dollar value of payments made.

(c) The distributional data source (a) does not contain frequency distributions or any other information on price-support payments. Because of the nature of price-support payments, however, it was possible to estimate a Lorenz curve from the distribution (by allotment size) of acreage planted by farmers participating in the feed grain program (see source (a), table 12) using as weights total 1964 price-support payments by State (from Farm Income, State Estimates, 1949–1965 (supplement to Farm Income Situation 203), USDA, ERS, August 1966, p. 137). This estimate was combined with the Lorenz curves for diversion payments and price-support benefits to produce this table.

and over, but in the Western States 40 percent of all benefits go to this group and in the South Central 11 percent. No other region has more than about 4 percent of total program benefits going to 500-acre allotments or larger.

It is interesting to contrast the pattern of concentration in feed grains with that of wheat. Price-support benefits are more concentrated in feed grains (.588) than in wheat (.566). But, diversion payments are less concentrated in feed grains (.405) than wheat (.480), and the net effect on total benefits is for a somewhat lesser degree of concentration in total feed grain benefits (.565) than in total wheat program benefits (.578).

The Cotton Program

The cotton program up until the 1966 crop has been pretty much a conventional price-support system. It is true that in 1964 and 1965 a "Rube Goldberg" structure involving "equalization payments" to cotton handlers prevailed. But the major transformation occurred in the omnibus farm bill of 1965 when the cotton program was redesigned to include a major direct payment feature—again the primary model was the feed grain program.

The distributional data are available in cotton for the crop years of 1961, 1963, and 1964. These data are distributions of participating allotment holders and acreage planted, by allotment size groups and by State. In 1961 and 1963 only a price support-acreage allotment system was in operation. In 1964, as I indicated, a peculiar sort of direct payment, the so-called equalization payment was introduced. However, the legislation was enacted so late in the year that in 1964 only about $39 million was put out in payments (*14*). In any case, we have no data on how these payments are distributed by allotment size class, so we are unable to compute State Lorenz curves for them.

Thus, for cotton we have the opportunity to observe changes in the distribution of price-support benefits over the period 1961–64.

Since there is for all practical purposes no cotton grown outside the support program, the weights used for aggregation purposes are value of production estimates computed from State average yield, price, and acreage harvested.[18]

A summary of the Gini ratios of concentration can be seen in table 15. In every case but the very minor production States of Illinois and Kentucky and in the States of New Mexico and Oklahoma, the Gini ratios increased between 1961 and 1964. The U.S. Gini ratios of concentration went from .613 in 1961 to .653 in 1964. Since the pattern is consistent this is probably a significant difference.

The regional pattern remains the same over the period 1961–64. The West was consistently the region of greatest concentration in benefit distribution (.682 in 1964) followed closely by the Delta (.657 in 1964) with the Southeast (.571 in 1964) and the Southwest (.542 in 1964) in a far lower range of concentration.[19]

TABLE 15.—*Upland cotton price-support benefits: Summary of Gini concentration ratios for United States, region, and State in 1961, 1963, and 1964* [1]

State	1961	1963	1964
Alabama	.421	.548	.546
Florida	.433	N.A.	.483
Georgia	.453	.533	.531
North Carolina	.420	.581	.577
South Carolina	.471	.591	.594
Virginia	.278	N.A.	.401
Southeast	.464	.571	.571
Arkansas	.563	.650	.652
Illinois	.747	....	.650
Kentucky	.477	.....	.613
Louisiana	.537	.627	.628
Mississippi	.572	.698	.701
Missouri	.495	.572	.565
Tennessee	.409	.522	.515
Delta	.563	.656	.657
Oklahoma	.457	.454	.446
Texas	.496	.512	.530
Southwest	.507	.525	.542
Arizona	.605	.635	.628
California	.665	.687	.686
New Mexico	.577	.571	.565
West	.663	.682	.682
United States	.613	.646	.653

Sources: Tables 16, 17, and 18.

[1] For an explanation of the Gini concentration ratio see section on procedure in this paper.

It is interesting to note that the lower half of the Lorenz curve hardly changed over this period. The lower half of all farmers received 11 percent of all U.S. cotton benefits in 1961, and 10 percent in both 1963 and 1964. The increase in concentration is the result of shifts in the upper half of the Lorenz distribution—and mostly at the very extreme upper end. The top 10 percent of farmers received 48 percent of all benefits in 1961, 52 percent in 1963, and 53 percent in 1964. However, the top 1 percent of farmers received 11 percent of all cotton program benefits in 1961, 19 percent in 1963, and 21 percent in 1964—almost doubling in 4 years.

A look at the distribution of benefits by allotment size for 1961 and 1964 in tables 19 and 20 indicates that the relative distribution remained fairly stable over this period on State, regional, and U.S. levels. This seems to imply that the increase in concentration is entirely the result of the shift in acreage from the low concentration Southeast region to the high concentration West which has been going on since World War I.

In any case, about 12 percent of all cotton program benefits accrue to farmers with allotments over 500 acres in size. About 28 percent go to those with 200 acre allotments or larger. Slightly more than half of all benefits go to those with allotments

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[18] These weighting systems, as indicated earlier, do not seem to have much effect on the Lorenz curves and Gini ratios of concentration. In constructing a partial equilibrium adjustment framework for evaluating cotton benefit distributions in a paper for the Brookings Institution (*1*), the author ended up with a relative weighting system for the 1964 cotton crop quite different from the one of this paper. However, the Gini ratios turned out identical in all cases except the Southwest where the Brookings weights resulted in a Gini of .541 instead of .542 (see table 15), the West where the Brookings Gini was .684 instead of .682, and for the United States where the Brookings paper Gini was .651 instead of the .653 we obtain here with simple value of production weights. None of these differences can be significant.

[19] You will notice the Southwest region, composed only of Texas and Oklahoma, has a regional Gini ratio of concentration that is consistently higher than either Oklahoma or Texas. We described this phenomenon earlier. At first not believing this outcome very likely and if true, wishing to understand it, I reworked the 1964 Lorenz curves for Texas, Oklahoma, and the Southwest region on a hand calculator. I got the same result, of course, and discovered that the variation between States in the mean benefit per allotment and the variation in the *relative* degree of dispersal about the mean created the observed result. Further exploration of the raw data of other regions and different commodities revealed that this phenomenon was not uncommon.

TABLE 16.—*Distribution of 1961 upland cotton price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries*[1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	concentration ratio [2]
Alabama	2.8	5.6	11.5	22	78	65	48	31	3.2	.421
Florida	3.7	7.4	12.3	20	80	65	52	34	7.5	.433
Georgia	2.0	4.7	10.5	19	81	66	52	33	5.4	.453
North Carolina	3.7	7.3	12.2	21	79	65	50	32	4.9	.420
South Carolina	2.4	4.9	9.3	18	82	69	52	35	6.8	.471
Virginia	6.6	13.3	22.1	33	67	56	43	28	7.0	.278
Southeast	2.6	5.1	9.3	19	81	69	52	34	4.6	.464
Arkansas	0.9	3.0	6.4	14	86	77	62	42	5.4	.563
Illinois	1.3	2.6	4.4	7	93	89	79	67	33.0	.747
Kentucky	2.5	5.0	8.3	15	85	73	51	29	2.5	.477
Louisiana	1.4	4.0	8.3	16	84	73	60	43	5.8	.537
Mississippi	1.3	2.6	6.8	13	87	76	63	45	5.6	.572
Missouri	1.0	2.6	6.4	16	84	71	54	33	3.4	.495
Tennessee	3.0	5.9	11.6	22	78	64	47	29	4.5	.409
Delta	1.4	2.9	7.1	13	87	75	62	44	6.4	.563
Oklahoma	0.9	3.3	8.1	19	81	67	49	39	5.5	.457
Texas	8.8	2.6	7.3	16	84	69	53	34	6.8	.496
Southwest	0.8	2.5	7.2	16	84	70	54	35	6.9	.507
Arizona	8.4	1.3	4.0	10	90	79	62	42	8.5	.605
California	0.7	1.9	4.8	95	90	83	71	55	10.4	.665
New Mexico	0.6	2.1	4.9	12	88	77	61	42	8.3	.577
West	0.5	1.5	4.1	9	91	83	70	53	11.3	.663
United States	1.0	2.0	5.3	11	89	79	66	48	10.8	.613

Sources: (a) 1961 Upland Cotton: Final Planted Acreage by Size of Effective Allotment, USDA, ASCS, Cotton Division, Mimeo., November 30, 1961, and also 1961 Upland Cotton: Producers Sharing in Crop by Size of Effective Allotment, USDA, ASCS, Cotton Division, Mimeo., November 30, 1961.

(b) Agricultural Statistics, 1963, USDA, 1963, p. 62. Prices from this source were used in computing State value of production figures for use as weights in combining the distributional data from source (a).

(c) Crop Production, 1962 Annual Summary, USDA, SRS, December 18, 1962, p. 93. Yield and acreage data from this source were used in computing State value of production figures for use as weights in combining the distributional data from source (a).

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

of 100 acres or less. A quarter of all cotton benefits go to farmers with 30 acre allotments or less.

The general conclusion must be that cotton benefits are rather highly concentrated and that this concentration has been increasing in recent years.

The Peanut Program

The peanut support program is a conventional price support-acreage allotment system. There are no direct payments. We have distributional data for the 1959, 1961, and 1964 crop years from which price-support benefits may be computed. The data on acreage distribution by allotment size groups are for allotment acreage, not planted acreage. But again, this should not be too much a source of distortion in peanuts. Crop loss and failure to plant do not appear to have figured too largely in the years covered. And the differences between State allotments and acreage harvested for nuts seem to be distributed nearly proportionately between States. Also, practically all the production of peanuts for nuts was within the program. For the same reasons the use of value of production by State as the relative weighting system appears appropriate.

The summary of the Gini ratios of concentration for 1959, 1961, and 1964 can be seen in table 21. While the trend in the U.S. concentration ratio is slightly upward, the differences are so small that

TABLE 17.—*Distribution of 1963 upland cotton price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries*[1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Alabama	2.1	4.2	8.3	17	83	74	60	46	15	.548
Georgia	1.4	3.4	8.3	16	84	72	58	42	11	.533
North Carolina	2.5	5.1	8.4	13	87	76	65	48	16	.581
South Carolina	1.8	3.5	5.9	13	87	78	63	48	13	.591
Southeast	1.9	3.8	6.5	15	85	76	61	47	14	.571
Arkansas	0.8	2.6	5.2	11	89	80	70	55	19	.650
Louisiana	1.1	3.0	6.5	12	88	78	68	54	16	.627
Mississippi	1.0	2.1	5.0	9	91	84	74	63	23	.698
Missouri	1.2	2.4	6.3	13	87	74	61	45	14	.572
Tennessee	2.4	4.9	8.5	18	82	73	59	42	12	.522
Delta	1.2	2.4	5.8	10	90	81	70	58	21	.656
Oklahoma	1.3	3.7	8.9	20	80	67	50	32	7	.454
Texas	0.7	2.4	7.1	16	84	70	54	36	10	.512
Southwest	0.7	2.4	7.0	15	85	72	55	38	10	.525
Arizona	0.6	1.6	4.2	9	91	80	66	48	14	.635
California	0.7	1.9	4.3	9	91	84	72	57	25	.687
New Mexico	0.7	2.4	5.6	14	86	76	62	42	11	.571
West	0.6	1.6	4.0	9	91	84	72	56	22	.683
United States	0.9	1.9	5.0	10	90	80	69	52	19	.646

Sources: (a) 1963 Upland Cotton: Summary of Allotments and Planted Acreages by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, Mimeo., December 31, 1963, pp. 1–8, and 1963 Upland Cotton: Number of Original and Effective Farm Allotments and Number of Farms Planting and Not Planting Allotments. USDA, ASCS, Policy and Program Appraisal Division, Mimeo., November 8, 1963, pp. 1–5.

(b) Agricultural Statistics, 1965. USDA, 1965, p. 63. Prices from this source were used in computing State value of production figures for use as weights in combining the distributional data from source (a).

(c) Crop Production, 1964 Annual Summary. USDA, SRS, December 18, 1964, p. 87. Yield and acreage data from this source were used in computing State value of production figures for use as weights in combining the distributional data from source (a).

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

[3] Due to lack of distributional data in source (a) above, Florida and Virginia are not included in the Southeast, and Illinois and Kentucky are not included in the Delta for 1963. While this introduces an element of noncomparability with 1961 and 1964, these are minor States in cotton production, and their omission from 1963 data is not thought to have much effect on the concentration ratios estimated for the regions or the United States.

they are in all likelihood not significant. These concentration ratios (.518 to .522) are the lowest of any program we have looked at so far.

The regional patterns are relatively stable with the old production area of the Southeast exhibiting the greatest concentration (.568 in 1964), the Virginia-North Carolina area next (.538 in 1964), and with the least and much lower concentration in the Southwest (.454 in 1964).

The Lorenz curve patterns in tables 22, 23, and 24 are very nearly the same for all 3 years. In 1964 the lower half of all peanut farmers received 16 percent of all program benefits. The regional and State figures do not vary much from the U.S. average. The top 10 percent of farmers receive 40 percent of the benefits.

The small size of the average peanut allotment can be deduced from tables 25 and 26. The distribution of benefits by allotment size group is about the same in 1964 as in 1959. Almost half the benefits accrue to farmers with allotments of 20 acres or less. Three-quarters of all benefits accrue to farmers with allotments of 50 acres or less. Only about 11 to 12

TABLE 18.—*Distribution of 1964 upland cotton price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Alabama	2.1	4.3	8.0	17	83	73	60	45	15	.546
Florida	2.7	5.3	8.8	19	81	69	54	37	10	.483
Georgia	1.2	3.0	8.0	16	84	71	58	42	11	.531
North Carolina	2.5	4.9	8.2	13	87	76	64	47	15	.577
South Carolina	1.7	3.3	5.6	13	87	77	63	48	13	.594
Virginia	5.2	10.4	17.3	26	74	65	52	37	11	.401
Southeast	1.9	3.7	6.2	15	85	75	61	47	14	.571
Arkansas	0.8	2.6	5.2	11	89	80	70	56	20	.652
Illinois	1.2	2.4	4.9	11	89	83	71	53	12	.650
Kentucky	1.5	3.0	5.0	11	89	80	66	47	10	.613
Louisiana	1.0	2.8	6.4	12	88	79	69	54	16	.628
Mississippi	1.0	2.1	4.9	9	91	84	75	64	23	.701
Missouri	1.3	3.0	6.5	14	86	74	61	44	14	.565
Tennessee	2.4	4.8	9.0	18	82	72	58	42	13	.515
Delta	1.2	2.3	5.9	11	89	81	70	58	21	.657
Oklahoma	1.1	3.7	9.6	21	79	65	50	31	7	.446
Texas	0.4	2.0	6.4	15	85	71	56	37	10	.530
Southwest	0.5	2.0	6.3	14	86	73	56	39	11	.542
Arizona	0.5	1.5	4.1	10	90	80	65	47	15	.628
California	0.7	1.9	4.2	8	92	84	72	57	25	.686
New Mexico	0.8	2.4	5.7	14	86	75	60	42	11	.565
West	0.5	1.6	3.9	8	92	84	72	56	22	.682
United States	0.9	1.8	4.9	10	90	80	69	53	21	.653

Sources: (a) 1964 Upland Cotton: Final Planted Acres and Number of Farms Planting Cotton by Size of Effective Allotment. USDA, ASCS, Policy and Program Appraisal Division, Mimeo., November 6, 1964 (2 pp.).

(b) Agricultural Statistics, 1966. USDA, 1966, p. 62. Prices from this source were used in computing State value of production figures for use as weights in combining the distributional data from source (a).

(c) Crop Production, 1965 Annual Summary. USDA, SRS, December 20, 1965, p. 84. Yield and acreage data from this source were used in computing State value of production figures for use as weights in combining the distributional data from source (a).

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

percent of the benefits are found on allotments of 100 acres or better.

In general we must conclude that even though benefit distributions are less concentrated than in many other programs, half of the farmers receiving only 16 percent of all benefits is still a rather highly concentrated distribution of benefits.

The Tobacco Program

The tobacco program is another program in which the benefits are generated by a straightforward price support-acreage allotment system with marketing quotas. There are some major differences in the way the tobacco program is handled, but these do not affect the nature of the price-support benefit stream or the manner in which we must compute its distribution.

Tobacco is really several products and we shall here treat the many different kinds of tobacco separately in their type classes. This makes presentation awkward for there are seven types, but we shall try to be brief.

The distributional data are, as in peanuts, in terms of distributions of allotment acreage by allotment size group by State and by tobacco type. We do not have planted acreage distributions. Again,

TABLE 19.—*Distribution of 1961 upland cotton price-support benefits: Proportion of U.S., regional, and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Percent of benefits accruing to allotments—								
	Under 5 acres	Under 10.1 acres	Under 15 acres	Under 30 acres	Under 50 acres	Under 100 acres	Under 200 acres	200 acres and over	500 acres and over
Alabama	7.6	29	40	61	72	83	92	7.8	2.0
Florida	17.2	45	57	78	87	93	100	0.0	0.0
Georgia	3.5	16	25	48	64	82	94	6.3	1.2
North Carolina	16.0	38	49	68	79	90	97	3.4	0.9
South Carolina	7.3	22	33	54	68	83	93	6.6	1.5
Virginia	20.0	75	84	92	96	99	100	0.0	0.0
Southeast	8.0	25	36	57	70	84	94	6.3	1.5
Arkansas	0.9	5	10	23	34	49	64	35.7	16.2
Illinois	8.2	22	33	45	59	69	69	30.7	0.0
Kentucky	8.8	17	22	30	51	72	94	5.6	0.0
Louisiana	1.8	10	17	33	45	60	75	24.6	7.1
Mississippi	2.6	11	17	29	38	49	62	38.0	16.6
Missouri	1.6	6	11	29	45	66	83	16.8	6.9
Tennessee	8.3	27	40	61	74	87	95	5.1	0.8
Delta	2.6	10	17	32	42	56	70	30.0	12.5
Oklahoma	0.6	5	10	31	56	83	96	4.3	0.7
Texas	0.2	1	3	10	22	49	76	24.4	6.8
Southwest	0.3	2	3	11	24	52	77	23.0	6.3
Arizona	0.2	1	2	5	11	24	45	54.6	23.6
California	0.2	1	4	12	19	33	50	50.0	32.3
New Mexico	0.8	4	7	20	35	62	81	18.6	5.5
West	0.3	2	3	11	19	34	52	47.9	26.8
United States	2.0	8	12	24	35	54	72	28.1	11.8

Source: (a) 1961 Upland Cotton: Final Planted Acreage by Size of Effective Allotment, USDA, ASCS, Cotton Division, Mimeo., November 30, 1961, and also, 1961 Upland Cotton: Producers Sharing in Crop by Size of Effective Allotment, USDA, ASCS, Cotton Division, Mimeo., November 30, 1961.

TABLE 20.—*Distribution of 1961 upland cotton price-support benefits: Proportion of U.S., regional, and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of benefits accruing to allotments—										
	Under 5 acres	Under 10.1 acres	Under 15 acres	Under 30 acres	Under 50 acres	Under 100 acres	Under 200 acres	200 acres and over	350 acres and over	500 acres and over	1,000 acres and over
Alabama	6.5	24	37	57	69	82	92	8.4	3.7	1.8	0.3
Florida	9.8	34	49	73	84	94	99	1.3	0.0	0.0	0.0
Georgia	2.1	12	22	45	63	81	93	6.9	3.0	1.3	0.0
North Carolina	12.1	30	41	60	72	86	95	5.4	1.8	1.0	0.3
South Carolina	5.6	18	28	47	61	79	92	8.3	3.1	1.6	0.4
Virginia	37.7	66	77	88	94	98	100	0.0	0.0	0.0	0.0
Southeast	6.3	21	32	53	66	82	93	7.5	3.1	1.5	0.3
Arkansas	0.9	5	11	24	34	50	65	34.5	21.9	15.1	6.6
Illinois	3.5	15	19	31	48	67	90	10.4	0.0	0.0	0.0
Kentucky	4.9	14	21	37	58	78	96	3.9	0.0	0.0	0.0
Louisiana	1.6	9	17	32	44	60	76	24.3	12.0	6.8	1.7
Mississippi	2.4	10	17	29	37	48	63	37.3	22.7	14.1	5.2
Missouri	2.1	7	15	34	50	71	85	14.5	8.7	5.1	1.7
Tennessee	7.3	26	40	61	74	88	95	4.6	1.6	0.6	0.0
Delta	2.5	11	18	32	43	56	71	29.4	17.7	11.3	4.3
Oklahoma	0.5	3	8	28	52	82	95	4.9	1.8	0.7	0.2
Texas	0.2	1	2	9	21	49	76	24.3	11.0	6.6	2.7
Southwest	0.2	1	3	10	23	51	77	23.1	10.4	6.2	2.6
Arizona	0.1	1	2	5	9	21	40	60.0	39.4	30.5	14.5
California	0.2	1	4	9	15	29	48	52.4	39.3	33.2	21.5
New Mexico	1.0	4	8	21	38	65	83	16.8	7.6	5.5	1.5
West	0.2	1	3	9	16	30	49	51.0	36.3	29.8	17.7
United States	2.0	8	13	25	36	54	71	28.6	17.1	12.1	5.9

Source: (a) 1964 Upland Cotton: Final Planted Acres and Number of Farms Planting Cotton by Size of Effective Allotment, USDA, ASCS, Policy and Program Appraisal Division, Mimeo., Nov. 6, 1964 (2 pp.).

however, all of the production is within the program and the use of allotment acreage does not appear to lead to distortions of any major order. Also, for the same reasons as in peanuts, the use of State value of production for the relative value weights is appropriate.

Data are available for 2 years, 1962 and 1965. A summary of all of the Gini ratios of concentration may be seen in table 27. There is no change in concentration between 1962 and 1965 for tobacco as a whole.

The changes in Gini ratios for individual types of tobacco are probably not significant except possibly in the case of fire-cured tobacco which declined in concentration (.453 to .440) and the cigar filler and binder class which increased in concentration (.418 to .450).

The Lorenz curves for these various types of tobacco are summarized in table 28 for 1962 and table 29 for 1965. The most remarkable thing about these U.S. summary statistics is how similar the Lorenz curves of the different tobacco types are and how stable they are between 1962 and 1965. In general, the lower half of tobacco farmers received about 19 percent of all benefits. The top 10 percent received a little over 35 percent of all benefits.

TABLE 21.—*Peanut price-support benefits: Summary of Gini concentration ratios for United States, region, and State in 1959, 1961, and 1964* [1]

State	1959	1961	1964
North Carolina	.556	.544	.549
Virginia	.469	.466	.500
Va. and N.C.	.535	.522	.538
Alabama	.531	.530	.513
Florida	.524	.531	.519
Georgia	.569	.577	.573
Mississippi	.390	.341	.569
South Carolina	.566	.567	.575
Southeast	.573	.573	.568
New Mexico	.397	.396	.420
Oklahoma	.492	.500	.463
Texas	.472	.496	.491
Southwest	.458	.473	.454
United States	.518	.521	.522

Sources: Tables 22, 23, and 24.

[1] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 22.—*Distribution of 1959 peanut price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
North Carolina	1.9	3.8	7.2	14	86	75	60	45	13.4	.556
Virginia	1.5	3.5	8.4	18	82	66	50	34	7.2	.469
Va. and N.C.	1.7	3.4	7.3	15	85	73	56	41	10.9	.535
Alabama	1.5	3.0	7.6	16	84	72	57	41	11.2	.531
Florida	2.2	4.4	8.1	16	84	72	58	41	13.4	.524
Georgia	1.2	3.2	6.8	14	86	74	62	46	12.3	.569
Mississippi	5.1	10.2	17.1	26	74	66	51	34	8.5	.390
South Carolina	1.8	3.7	7.4	14	86	76	61	46	13.7	.566
Southeast	1.4	3.0	6.8	14	86	75	62	46	13.5	.573
New Mexico	2.2	6.1	12.6	23	77	62	44	31	6.5	.397
Oklahoma	1.6	3.3	8.1	17	83	69	52	36	8.3	.492
Texas	1.5	4.2	9.1	20	80	68	52	36	8.7	.472
Southwest	1.4	4.3	9.6	19	81	65	51	34	8.1	.458
United States	1.6	3.6	7.9	16	84	70	56	40	11.2	.518

Sources: (a) Frequency Distribution by States of 1959 Farm Peanut Allotments by Size Groups, Number of Farms and Acreage Allotted to Farms in Each Group. USDA, ASCS, Production Programs Branch, Oil and Peanuts Division, Mimeo., April 8, 1959, pp. 1–5.

(b) Agricultural Statistics, 1961. USDA, 1962, p. 130.

TABLE 23.—*Distribution of 1961 peanut price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
North Carolina	2.0	4.0	8.1	15	85	73	59	44	13.0	.544
Virginia	1.5	3.8	8.8	18	82	65	51	34	7.4	.466
Va. and N.C.	1.8	3.7	8.1	16	84	72	56	40	11.0	.522
Alabama	1.5	3.2	7.6	16	84	72	57	41	11.1	.530
Florida	2.1	4.1	8.0	16	84	73	58	42	13.3	.531
Georgia	1.1	3.0	6.5	13	87	75	62	46	12.1	.577
Mississippi	6.0	12.1	20.1	30	70	60	50	35	9.0	.341
South Carolina	1.8	3.6	7.4	14	86	76	61	46	13.6	.567
Southeast	1.4	3.1	6.7	13	87	75	62	46	12.8	.573
New Mexico	2.3	5.9	12.1	23	77	61	44	30	6.4	.396
Oklahoma	1.4	3.2	7.5	16	84	69	54	37	8.6	.500
Texas	1.1	3.4	7.9	18	82	70	54	37	8.8	.496
Southwest	1.3	3.7	8.8	18	82	67	52	35	8.1	.473
United States	1.6	3.6	7.8	16	84	70	57	41	11.3	.521

Sources: (a) Frequency Distribution by States of 1961 Farm Peanut Allotments by Size Groups, Number of Farms and Acreage Allotted to Farms in Each Group. USDA, ASCS, Production Programs Branch, Oil and Peanuts Division Mimeo., May 12, 1961.

(b) Agricultural Statistics 1963. USDA, 1963, p. 128.

TABLE 24.—*Distribution of 1964 peanut price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
North Carolina	1.9	3.8	8.0	15	85	74	59	45	12.9	.549
Virginia	1.3	3.4	8.0	17	83	68	55	38	9.1	.500
Va. and N.C.	1.7	3.4	7.7	15	85	73	58	42	11.5	.538
Alabama	1.5	4.0	8.6	17	83	70	57	41	10.9	.513
Florida	1.9	4.2	8.9	17	83	71	56	42	12.5	.519
Georgia	1.1	3.1	6.7	13	87	75	62	46	12.0	.573
Mississippi	3.1	6.2	10.3	15	85	79	67	48	8.2	.569
South Carolina	1.5	3.1	6.9	14	86	76	62	47	13.4	.575
Southeast	1.3	3.4	7.1	14	86	74	62	46	12.4	.568
New Mexico	2.1	5.4	11.5	22	78	63	48	32	6.4	.420
Oklahoma	1.5	4.2	9.3	20	80	66	51	35	8.3	.463
Texas	1.2	3.5	8.5	18	82	69	54	36	8.2	.491
Southwest	1.5	4.3	9.7	21	79	67	51	34	7.4	.454
United States	1.5	3.8	8.2	16	84	71	57	41	10.8	.522

Sources: (a) Frequency Distribution by States of 1964 Farm Peanut Allotments by Size Groups, Number of Farms and Acreage Allotted to Farms in Each Group. USDA, ASCS, Production Programs Branch, Oil and Peanuts Division, Mimeo., June 23, 1964, pp. 1–6.

(b) Agricultural Statistics, 1966. USDA, 1966, p. 128.

TABLE 25.—*Distribution of 1959 peanut price-support benefits: Proportion of U.S., regional, and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of total benefits accruing to farmers with allotments—										
	3 acres and under	5 acres and under	10 acres and under	20 acres and under	30 acres and under	50 acres and under	Over 50 acres	Over 75 acres	Over 100 acres	Over 300 acres	Over 500 acres
North Carolina	5.7	13.8	33	55	67	79	21	13.6	9.6	1.9	0.0
Virginia	2.6	6.8	23	54	71	86	14	5.8	2.7	0.0	0.0
Va. and N.C.	4.4	10.9	29	55	68	82	18	10.4	6.7	1.1	0.0
Alabama	3.0	9.2	26	51	65	78	22	13.0	8.7	1.1	0.3
Florida	6.6	16.6	41	63	74	84	16	10.8	7.5	1.6	1.6
Georgia	1.8	5.9	18	37	50	65	35	24.7	18.1	3.5	1.7
Mississippi	34.5	51.3	83	92	92	100	0	0.0	0.0	0.0	0.0
South Carolina	5.0	14.2	31	50	63	77	23	14.6	10.1	2.4	0.0
Southeast	2.5	7.5	21	42	55	69	31	21.3	15.4	2.9	1.4
New Mexico	1.7	8.3	32	69	82	92	8	4.1	2.1	0.0	0.0
Oklahoma	3.0	8.9	27	55	71	87	13	6.1	3.8	0.4	0.4
Texas	0.7	2.7	13	35	53	73	27	15.0	9.2	1.5	0.4
Southwest	1.6	5.3	19	44	61	79	21	11.2	6.9	1.0	0.4
United States	3.0	8.2	23	47	61	75	25	15.5	10.6	1.9	0.7

Source: (a) Frequency Distribution by States of 1959 Farm Peanut Allotments by Size Groups, Number of Farms and Acreage Alloted to Farms in Each Group. USDA, ASCS, Production Programs Branch, Oil and Peanuts Division, Mimeo., April 8, 1959. pp. 1–5.

TABLE 26.—*Distribution of 1964 peanut price-support benefits: Proportion of U.S., regional, and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of total benefits accruing to farmers with allotments—										
	3 acres and under	5 acres and under	10 acres and under	20 acres and under	30 acres and under	50 acres and under	Over 50 acres	Over 75 acres	Over 100 acres	Over 300 acres	Over 500 acres
North Carolina	5.1	13.0	32	54	66	78	22	14.5	9.7	1.9	0.0
Virginia	2.4	6.5	22	53	70	85	15	6.5	3.1	0.0	0.0
Va. and N.C.	4.1	10.5	28	54	67	80	20	11.5	7.2	1.2	0.0
Alabama	2.9	8.8	25	49	63	78	22	13.1	8.9	1.1	0.3
Florida	5.9	15.2	38	60	72	82	18	10.7	8.4	1.6	1.6
Georgia	1.6	5.1	15	33	46	61	39	27.6	20.2	4.1	2.1
Mississippi	46.7	59.9	84	91	91	100	0	0.0	0.0	0.0	0.0
South Carolina	4.6	11.9	28	48	61	76	24	15.8	11.4	2.6	0.0
Southeast	2.4	7.0	20	39	52	67	33	22.7	16.5	3.2	1.6
New Mexico	1.6	7.6	29	65	81	91	9	4.0	2.1	0.0	0.0
Oklahoma	2.6	7.4	23	50	68	85	15	8.0	4.6	0.2	0.0
Texas	0.9	3.0	12	33	50	71	29	16.5	10.0	1.4	0.4
Southwest	1.6	4.9	17	41	58	77	23	12.6	7.5	0.9	0.2
United States	2.7	7.6	22	44	58	73	27	17.1	11.7	2.1	0.8

Source: (a) Frequency Distribution by States of 1964 Farm Peanut Allotments by Size Groups, Number of Farms and Acreage Alloted to Farms in Each Group. USDA, ASCS, Production Programs Branch, Oil and Peanuts Division, Mimeo., June 23, 1964, pp. 1–6.

TABLE 27.—*Tobacco price-support benefits: Summary of Gini concentration ratios for various types of tobacco and all tobacco for 1962 and 1965* [1]

Type of tobacco	1962	1965
Flue cured	.494	.495
Fire cured	.453	.440
Burley	.483	.482
Dark air cured	.461	.463
Maryland	.482	.498
Cigar filler and binder	.418	.450
Virginia sun cured	.447	.502
All tobacco	.476	.476

Sources: Tables 29 through 44.

[1] For an explanation of the Gini concentration ratio see section on procedures in this paper.

This stability over time and lack of variation between Lorenz curves also tends to be true as you look at the individual types of tobacco and their component States (tables 30 through 46). The curves are very stable between 1962 and 1965 for all tobacco types. There is some greater variation between States within a tobacco type, but the variation is still less than one might have expected. The greatest variation is found in burley tobacco (tables 34 and 35) and cigar filler and binder tobacco (tables 40 and 41).

Looking again at benefit distribution by size of allotment, but this time for types of tobacco (see tables 44, 45, and 46), one can see that the average size of allotment varies greatly between types of tobacco. In flue-cured tobacco (see table 44) half of the benefits accrue to farmers with allotments of less than 5 acres. In burley tobacco half of the allotments accrue to farmers with less than 2 acres of allotment. Cigar filler and binder tobacco benefits are distributed so that half goes to farmers with less than 4 acres of allotment. Though these are all quite small, compared to other commodities, the proportionate variation in average allotment size between tobacco types is considerable.

TABLE 28.—*Distribution of 1962 tobacco (all varieties) price-support benefits: Proportion of benefits received in United States for individual types of tobacco and for all tobacco by various percentiles of farmer beneficiaries* [1]

Type of tobacco	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Flue cured	0.8	3.3	8.7	18	82	69	54	38	9.6	.494
Fire cured	0.8	3.2	8.5	21	79	65	49	33	7.6	.453
Burley	1.3	4.4	10.9	20	80	69	54	40	11.5	.483
Dark air cured	0.9	3.6	9.3	19	81	67	51	32	7.6	.461
Maryland	0.7	2.5	6.7	16	84	69	49	30	5.6	.482
Cigar filler and binder	0.9	3.6	10.5	21	79	63	46	29	6.2	.418
Virginia sun cured	0.7	2.8	8.2	20	80	66	48	30	5.4	.447
All tobacco	1.1	3.9	9.4	19	81	67	53	36	9.0	.476

Sources: (a) Distribution of 1962 Tobacco Acreage Allotments by Size Groups. USDA, ASCS. Tobacco Division, September 1962.
(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

The average Gini concentration ratio of .476 for all tobacco is the lowest we have yet encountered in any program. But, even in the tobacco program the bottom half of all tobacco farmers receive only 19 percent of the total program benefits.

The Sugar Program

The sugar program concerns sugar which at retail is the same product, but it involves two very different commodities at the farm level: sugarcane and sugarbeets. We will look first at sugarcane.

TABLE 29.—*Distribution of 1965 tobacco (all varieties) price-support benefits: Proportion of benefits received in United States for individual types of tobacco and for all tobacco by various percentiles of farmer beneficiaries* [1]

Type of tobacco	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Flue cured	0.8	3.2	9.0	18	82	69	54	38	9.9	.495
Fire cured	0.9	3.4	9.0	21	79	63	49	32	7.3	.440
Burley	1.5	4.8	11.3	21	79	69	54	40	11.6	.482
Dark air cured	0.9	3.7	9.0	19	81	67	51	32	7.8	.463
Maryland	0.5	2.2	6.1	15	85	70	52	31	5.8	.498
Cigar filler and binder	1.1	3.4	9.3	20	80	65	49	32	7.8	.450
Virginia suncured	0.7	2.3	6.5	17	85	69	52	33	6.0	.502
All tobacco	1.2	3.9	9.9	19	81	67	53	37	9.0	.476

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397. USDA, C & MS. April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 30.—*Distribution of 1962 flue-cured tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
North Carolina	0.8	3.4	8.2	18	82	69	54	38	9.4	.495
Florida	1.0	4.2	11.9	22	78	65	50	34	7.9	.440
Alabama	1.1	2.1	5.6	16	84	68	51	34	0.0	.495
Georgia	1.5	5.4	12.2	22	78	64	49	33	7.1	.427
South Carolina	0.7	2.0	6.1	14	86	73	57	40	9.5	.543
Virginia	1.3	4.6	10.6	21	79	65	49	33	7.5	.443
United States	0.8	3.3	8.7	18	82	69	54	38	9.6	.494

Sources: (a) Distribution of 1962 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Tobacco Division, September 1962.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397. USDA, C & MS. April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 31.—*Distribution of 1965 flue-cured tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
North Carolina	0.8	3.2	8.8	18	82	69	54	38	10.0	.496
Florida	1.4	5.0	10.6	22	78	65	51	36	8.9	.447
Alabama	0.9	1.9	4.9	14	86	71	54	37	9.6	.527
Georgia	1.5	4.7	12.5	22	78	64	49	33	7.3	.429
South Carolina	0.8	1.8	5.2	13	87	74	58	41	10.0	.554
Virginia	1.4	4.1	11.0	20	80	65	50	33	7.5	.445
United States	0.8	3.2	9.0	18	82	69	54	38	9.9	.495

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments, by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 32.—*Distribution of 1962 fire-cured tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Kentucky	0.7	3.2	9.4	23	77	62	45	30	7.1	.417
Tennessee	1.1	3.8	9.8	22	78	64	48	31	7.0	.431
Virginia	1.0	3.7	9.2	19	81	64	49	32	7.2	.446
United States	0.8	3.2	8.5	21	79	65	49	33	7.6	.453

Sources: (a) Distribution of 1962 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Tobacco Division, September 1962.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 33.—*Distribution of 1965 fire-cured tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Kentucky	0.7	3.2	9.2	22	78	61	47	30	7.1	.421
Tennessee	0.9	3.6	9.1	21	79	64	48	32	6.9	.440
Virginia	1.1	4.0	9.7	20	80	63	49	31	7.1	.435
United States	0.9	3.4	9.0	21	79	63	49	32	7.3	.440

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments, by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 34.—*Distribution of 1962 burley tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Kentucky	1.2	4.3	10	17	83	69	56	40	10.9	.502
Tennessee	1.8	5.7	14	28	72	57	44	27	6.9	.350
North Carolina	2.2	6.2	14	28	72	54	40	25	5.1	.329
Virginia	2.2	6.4	16	30	70	54	40	24	5.2	.312
Ohio	1.6	5.6	13	24	76	64	47	33	7.7	.406
Indiana	1.7	5.8	14	27	73	60	45	30	7.0	.374
West Virginia	2.3	7.1	17	33	67	51	38	22	4.2	.281
Missouri	1.5	4.2	8	16	84	73	59	41	12.0	.534
United States	1.3	4.4	11	20	80	69	54	40	11.5	.483

Sources: (a) Distribution of 1962 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Tobacco Division, September 1962.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 35.—*Distribution of 1965 burley tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Kentucky	1.3	4.6	10	17	83	70	56	40	11.0	.502
Tennessee	2.0	6.3	15	29	71	57	44	28	7.1	.344
North Carolina	2.5	6.9	15	30	70	54	40	26	5.3	.314
Virginia	2.5	7.3	17	31	69	54	40	25	5.2	.303
Ohio	1.8	6.3	14	25	75	64	47	31	7.9	.402
Indiana	2.1	6.7	15	27	73	60	46	29	7.1	.367
West Virginia	3.1	8.6	19	35	65	50	37	23	4.3	.255
Missouri	1.9	4.6	9	16	84	71	58	41	12.6	.524
United States	1.5	4.8	11	21	79	69	54	40	11.6	.482

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments, by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 36.—*Distribution of 1962 dark air-cured tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Kentucky	0.9	3.6	9.5	19	81	67	51	32	7.7	.458
Tennessee	1.3	3.7	9.4	20	80	66	51	34	6.7	.455
United States	0.9	3.6	9.3	19	81	67	51	32	7.6	.461

Sources: (a) Distribution of 1962 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Tobacco Division, September 1962.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397 USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 37.—*Distribution of 1965 dark air-cured tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Kentucky	0.9	3.7	9.4	19	81	67	50	32	7.9	.457
Tennessee	1.3	3.9	9.3	19	81	66	51	34	7.0	.463
United States	0.9	3.7	9.0	19	81	67	51	32	7.8	.463

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments, by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 38.—*Distribution of 1962 Maryland tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Maryland and United States	0.7	2.5	6.7	16	84	69	49	30	5.6	.482

Sources: (a) Distribution of 1962 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Tobacco Division, September 1962.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397. USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 39.—*Distribution of 1965 Maryland tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Maryland and United States	0.5	2.2	6.1	15	85	70	52	31	5.8	.498

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments, by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 40.—*Distribution of 1962 cigar filler and binder tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Ohio	1.1	4.6	12	26	74	56	39	24	4.2	.348
Wisconsin	1.0	3.7	11	22	78	61	44	27	4.9	.402
Connecticut	1.2	3.9	8	17	83	70	55	39	11.0	.504
Massachusetts	1.7	5.0	11	21	79	66	50	34	8.4	.444
United States	0.9	3.6	10	21	79	63	46	29	6.2	.418

Sources: (a) Distribution of 1962 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Tobacco Division, September 1962.

(b) For use as the weighis in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 41.—*Distribution of 1965 cigar filler and binder tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Ohio	1.4	5.5	13.9	27	73	55	38	23	4.1	.326
Wisconsin	1.2	4.3	12.0	24	76	61	43	27	4.8	.383
Connecticut	1.0	1.9	4.3	9	91	82	69	51	14.1	.647
Massachusetts	1.6	3.2	5.3	11	89	79	67	49	13.7	.616
United States	1.1	3.4	9.3	20	80	65	49	32	7.8	.450

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments, by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 42.—*Distribution of 1962 Virginia sun-cured tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Virginia and United States........	0.7	2.8	8.2	20	80	66	48	30	5.4	.447

Sources: (a) Distribution of 1962 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Tobacco Division, September 1962.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 43.—*Distribution of 1965 Virginia sun-cured tobacco price-support benefits: Proportion of U.S. and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Virginia and United States........	0.7	2.3	6.5	17	85	69	52	33	6.0	.502

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments. by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS. April 1967, table 2.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

TABLE 44.—*Distribution of 1965 flue-cured tobacco price-support benefits: Proportion of U.S. and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of benefits accruing to farmers with allotments—										
	1 acre and under	2 acres and under	3 acres and under	4 acres and under	5 acres and under	7 acres and under	10 acres and under	Over 10 acres	Over 50 acres	Over 100 acres	Over 200 acres
North Carolina..........	2.8	12	28	39	49	62	73	27	2.9	0.9	0.1
Florida................	11.6	38	56	67	74	82	89	11	0.6	0.0	0.0
Alabama................	6.5	19	37	55	66	75	85	15	0.0	0.0	0.0
Georgia................	4.5	26	46	59	68	79	88	12	0.2	0.2	0.0
South Carolina..........	5.4	15	29	39	48	61	74	26	1.8	0.2	0.0
Virginia...............	4.1	20	38	53	63	76	86	14	1.1	0.2	0.0
United States...........	3.6	15	31	43	53	65	77	23	2.2	0.7	0.0

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.

(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA. C & MS, April 1967, table 2.

Table 45.—*Distribution of 1965 burley tobacco price-support benefits: Proportion of U.S. and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of benefits accruing to farmers with allotments—										
	0.3 acre and under	0.5 acre and under	0.6 acre and under	1 acre and under	2 acres and under	Over 2 acres	Over 3 acres	Over 5 acres	Over 10 acres	Over 50 acres	Over 100 acres
Kentucky	1.2	6	15	25	48	52	38	22	9.2	0.5	0.0
Tennessee	4.4	20	49	64	87	13	7	3	0.9	0.0	0.0
North Carolina	7.8	32	61	75	94	6	2	1	0.0	0.0	0.0
Virginia	5.1	22	53	71	92	8	3	1	0.0	0.0	0.0
Ohio	2.1	11	31	44	74	26	15	7	1.8	0.0	0.0
Indiana	3.0	14	40	53	81	19	10	4	0.7	0.0	0.0
West Virginia	4.1	22	62	75	96	4	1	0	0.0	0.0	0.0
Missouri	0.3	4	9	16	34	66	52	33	13.7	6.1	4.3
United States	2.3	10	26	37	61	39	28	16	6.5	0.4	0.0

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.
(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

Table 46.—*Distribution of 1965 cigar filler and binder tobacco price-support benefits: Proportion of U.S. and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of benefits accruing to farmers with allotments—										
	0.5 acres and under	1 acre and under	2 acres and under	3 acres and under	4 acres and under	5 acres and under	Over 5 acres	Over 7 acres	Over 10 acres	Over 20 acres	100 to 200 acres
Ohio	0.6	2.1	9	27	51	69	31	11	4	0.5	0.0
Wisconsin	0.9	4.0	18	39	57	71	29	13	4	0.4	0.0
Connecticut	2.5	7.5	16	23	31	37	63	52	41	17.2	2.7
Massachusetts	5.3	13.9	28	37	46	54	46	34	26	13.8	0.0
United States	1.4	5.0	17	35	51	64	36	21	12	4.3	0.5

Sources: (a) Distribution of 1965 Tobacco Acreage Allotments by Size Groups. USDA, ASCS, Policy and Program Appraisal Division, November 1965.
(b) For use as the weights in combining the State distributional data of source (a), value of production figures were obtained by tobacco variety and by State from Annual Report on Tobacco Statistics, 1966, Statis. Bul. 397, USDA, C & MS, April 1967, table 2.

Sugarcane

The support program in sugar involves a strict acreage allotment and marketing quota system (but no nonrecourse loans with the Commodity Credit Corporation.) These production and marketing controls are managed to maintain a price objective in the market. Consequently, we will refer to these as price supports even though the Government does not enter as a market of last recourse for the farmer. In addition, direct Government payments are made on the basis of a set rate per ton of allowed quota. This, of course, means that the direct payments have the same distributional characteristics as the acreage allotment and thus exhibit the same concentration ratios.

The distributional data we have are similar to all of that used in estimating price-support benefits: distributions of allotment holders and acreage planted by size of allotment and by State. State production and processor payment per ton are combined to obtain a value of production weight for aggregation purposes. The Government payment is available only in the form of an average rate of payment per ton for each State. This was multiplied by State production to get total payments. Payments were distributed in proportion to the distribution of planted acreage by size of allotment by State.

The distributional data we have are only for the crop year 1965.

A summary of Gini ratios of concentration for total program benefits can be seen in table 47. Florida has the lowest concentration ratio with a Gini of .638 followed by Louisiana with .685. But the Commonwealth of Puerto Rico has a Gini concentration ratio of .824 and Hawaii one of .918. The average U.S. concentration ratio is .799.

TABLE 47.—*Sugarcane and sugarbeet price and income support program benefits: Summary of Gini concentration ratios, for the United States, region, and State in 1965* [1]

State	Total sugarcane benefits [2]	Total sugarbeet benefits [2]
Louisiana	.685	.....
Florida	.638	.....
Hawaii	.918	.....
Puerto Rico	.824	.....
New York	.....	.381
Ohio	.....	.327
Illinois	.....	.290
Michigan	.....	.373
Northeast	.....	.366
Minnesota	.....	.279
Iowa	.....	.232
North Dakota	.....	.208
Nebraska	.....	.293
Kansas	.....	.327
Texas	.....	.234
Montana	.....	.293
Wyoming	.....	.323
Colorado	.....	.367
New Mexico	.....	.115
Utah	.....	.458
Central States	.....	.346
Nevada	.....	.494
Washington	.....	.328
Oregon	.....	.396
California	.....	.468
Idaho	.....	.446
West	.....	.488
United States	.799	.456

Sources: Tables 48, 49, 50, 51, 52, and 53.

[1] For an explanation of the Gini concentration ratio see section on procedures in this paper.

[2] Since both components of benefits (price supports and government payments) are keyed directly to output, their distributions and that for total benefits are identical.

TABLE 48.—*Distribution of 1965 sugarcane price-support benefits: Proportion of U.S., State, and Puerto Rican benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
Louisiana	8.3	1.2	3.5	8.2	92	84	72	57	18	.685
Florida	0.2	0.8	2.0	4.9	95	91	63	32	3	.638
Hawaii	0.2	0.3	0.8	1.5	99	97	96	95	22	.918
Puerto Rico	0.9	1.8	3.0	4.5	95	92	87	78	41	.824
United States	0.4	1.0	2.1	4.2	96	92	83	72	24	.799

Sources: (a) Acreage planted and farm number distributions for individual States for 1965 are from the records of the USDA's Farmer Programs Division of ASCS.

(b) For computing the weights used in combining the State distributional data of source (a), production figures were obtained from Sugar Reports, USDA, ASCS No. 180, January 1967, p. 25 for Louisiana and Florida and Sugar Reports, USDA, ASCS No. 167, April 1966, p. 22 for Hawaii and Puerto Rico.

(c) For computing the weights used in combining the State distributional data of source (a) season average prices per ton of output were obtained from Sugar Reports, USDA, ASCS No. 176, January 1967, p. 26 for Louisiana and Florida, from Sugar Reports, USDA, ASCS No. 167, April 1966, p. 25 for Puerto Rico. Prices are not directly available for Hawaii so it was necessary to construct estimates. Processor price or season average price for marketings was estimated by multiplying the "value from sale of raw sugar and molasses" (from Sugar Reports, op. cit., No. 167, p. 24) by 59 percent (the average relationship between "value of sales" and "processor payments" for Florida, Louisiana, and Puerto Rico) and dividing by cane production in Hawaii (ibid., p. 22). These relationships were very similar for the mainland and Puerto Rico and exhibited a fairly stable behavior over time.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

The Lorenz curves are quite varied. In only one case, Louisiana, do the lower half of cane farmers receive more than 5 percent of the program benefits. But in Louisiana the top 10 percent of farmers receive 57 percent of the program benefits while in Florida they receive 32 percent of the benefits. The average size of allotment differs greatly. In Puerto Rico the top 10 percent of farmers receive 78 percent of the benefits and in Hawaii they receive 95 percent. However, when you look at the benefits received by the top 1 percent, you find 41 percent of the benefits in Puerto Rico and 22 percent of the benefits in Hawaii accruing to this uppermost group (see table 49).

A look at table 50 for the distribution of benefits by allotment size class is quite interesting. Louisiana, which has the highest mainland concentration ratio (.685), has 57 percent of program benefits accruing to farmers with allotments of under 500 acres, while Florida with a lower concentration ratio (.638) has only 11 percent. A similar contrast, at far higher levels of concentration, exists between Puerto Rico and Hawaii. In Hawaii, 92 percent of all benefits accrue to 24 allotment holders of 1,000 acres or better. In Puerto Rico, 26 percent of all benefits accrue to 19 allotment holders of 1,000 acres average or better.

The conclusion about the sugarcane portion of the sugar program is that it exhibits great concentration of benefit distribution. The concentration of program benefits in Hawaii is little short of astounding with a ratio of .918 out of a possible 1.000.

Sugarbeets

The same kind of support program system is operated for beets as for cane, so we need not repeat the description of the program. The same type of data were available and the Lorenz curve estimation and aggregation procedure were also identical.

Table 47 summarizes the Gini concentration ratios for sugarbeets. These are all well below cane. The highest concentration ratio is .488 for the Western region. The U.S. average ratio of concentration for 1965 was .456. The Gini ratios for the Northeast (.366) and the Central States (.345) are even lower. Thus, the pattern of concentration in sugarbeets is the lowest of all of the commodity programs studied here, while that for cane is the highest. Even so, the lower half of all beet farmers receive only a

TABLE 49.—*Distribution of total 1965 sugarcane benefits, price-supports, and Government payments: Proportion of U.S., State, and Puerto Rican benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
Louisiana	8.3	1.2	3.5	8.2	92	84	72	57	18	.685
Florida	0.2	0.8	2.0	4.9	95	91	63	32	3	.638
Hawaii	0.2	0.3	0.8	1.5	99	97	96	95	22	.918
Puerto Rico	0.9	1.8	3.0	4.5	95	92	87	78	41	.824
United States	0.4	1.0	2.1	4.2	96	92	83	72	24	.800

Sources: (a) Acreage planted and farm number distributions for individual States for 1965 are from the records of the USDA's Farmer Programs Division of ASCS.

(b) For computing the weights used in combining the State distributional data of source (a), production figures were obtained from Sugar Reports, USDA, ASCS No. 180, January 1967, p. 25 for Louisiana and Florida and Sugar Reports, USDA, ASCS No. 167, April 1966, p. 22 for Hawaii and Puerto Rico.

(c) For computing the weights used in combining the State distributional data of source (a), season average prices and government payments rates and per ton of output were obtained from Sugar Reports, USDA, ASCS No. 176, January 1967, p. 26 for Louisiana and Florida, from Sugar Reports, USDA, ASCS No. 167, April 1966, p. 25 for Puerto Rico. Prices are not directly available for Hawaii so it was necessary to construct estimates. Processor price or season average price for marketings was estimated by multiplying the "value from sale of raw sugar and molasses" (from Sugar Reports, op. cit., No. 167, p. 24) by 59 percent (the average of relationship between "value of sales" and "processor payments" for Florida, Louisiana, and Puerto Rico) and dividing by cane production in Hawaii (ibid., p. 22). These relationships were very similar for the mainland and Puerto Rico and exhibited a fairly stable behavior over time. The government payment rate for Hawaii in 1965 was computed by dividing "total sugar act payments" (ibid., p. 22) for Hawaii in 1965.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

Table 50.—*Distribution of total 1965 sugarcane benefits, price-supports and government payments: Proportion of U.S., State, and Puerto Rican benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Percent of benefits accruing to farmers with allotments—										
	Under 10 acres	Under 25 acres	Under 50 acres	Under 100 acres	Under 200 acres	Under 500 acres	Under 1,000 acres	1,000 acres and over	2,000 acres and over	6,000 acres and over	12,000 acres and over
Louisiana	0.5	2.1	7.4	18	33	57	72	28	N.A.	N.A.	N.A.
Florida	0.0	0.1	0.4	1	4	11	N.A.	N.A.	N.A.	N.A.	N.A.
Hawaii	1.4	4.0	5.7	7	7	8	8	92	N.A.	N.A.	N.A.
Puerto Rico	9.8	17.8	25.8	34	43	64	74	26	21	17	11
United States	3.4	7.0	11.0	16	22	34	N.A.	N.A.	N.A.	N.A.	N.A.

Sources: (a) Acreage planted and farm number distributions for individual States for 1965 are from the records of the USDA's Farmer Programs Division of ASCS.

(b) For computing the weights used in combining the State distributional data of source (a), production figures were obtained from Sugar Reports, USDA, ASCS, No. 180, January 1967, p. 25 for Louisiana and Florida and Sugar Reports, USDA, ASCS, No. 167, April 1966, p. 22 for Hawaii and Puerto Rico.

(c) For computing the weights used in combining the State distributional data of source (a) season average prices and government payment rates per ton of output were obtained from Sugar Reports, USDA, ASCS, No. 176, January 1967, p. 26 for Louisiana and Florida, and from Sugar Reports, USDA, ASCS, No. 167, April 1966, p. 25 for Puerto Rico. Prices are not directly available for Hawaii so it was necessary to construct estimates. Processor price or season average price for marketings was estimated by multiplying the "value from sale of raw sugar and molasses" (from Sugar Reports, op. cit., No. 167, p. 24) by 59 percent (the average relationship between "value of sales" and "processor payments" for Florida, Louisiana, and Puerto Rico) and dividing by cane production in Hawaii (ibid., p. 22). These relationships were very similar for the mainland and Puerto Rico and exhibited a fairly stable behavior over time. The government payment rate for Hawaii in 1965 was computed by dividing "total sugar act payments" (ibid., p. 24) by "cane production" (ibid., p. 22) for Hawaii in 1965.

quarter of the program benefits in the Northeast and Central States and only 18 percent in the West.

The top 10 percent of beet farmers receive just under 30 percent of all benefits in the Northeast and Central States but 38 percent in the West (see tables 51 and 52).

What this represents in terms of the distribution of benefits by allotment size class can be seen in table 53. The proportion of benefits accruing to allotment holders with less than 100 acres ran from 90 percent in the Northeast, to 68 percent in the Central States, to only 44 percent in the area of highest concentration, the West. In the Northeast only 1.5 percent of benefits accrued to farmers with allotments of 200 acres or larger. In the Central States 9 percent of benefits accrued to 200 acre allotments or over. In the West, however, a third of all program benefits went to allotments of 200 acres and over; 10 percent accrued to allotments of 500 acres or larger.

Conclusions for Sugar Program

The sugar program presents the anomaly of having the highest degree of concentration (in sugarcane) and the lowest degree of concentration (in sugarbeets) of benefits in all of the eight commodity programs presented here. The author has long been aware that cane benefits were highly concentrated, but the degree of this concentration is still surprising. It is almost as surprising to find that beet benefits are less concentrated than peanut and tobacco benefits. However, even in the least concentrated sugarbeet region in 1965 the lower half of beet farmers received only one quarter of all program benefits.

Conclusions

The relative distributions of benefits for eight different commodity programs have been described. What are we to conclude about the appropriateness of farm commodity programs as the primary instrument of assuring some minimum level of living to the very lowest income groups in farm life?

It is not possible to draw direct or conclusive inferences from the Lorenz curve descriptions. There are too many noncomparabilities to account for. However, the implications are fairly clear that these programs would not be an efficient means of improving the welfare of the lowest income groups on farms. We know that slightly more than 40 percent of farm families earn net money incomes of less than $3,000 (*4*). If you look at table 54 which summarizes the Lorenz curves and Gini ratios for all of

TABLE 51.—*Distribution of 1965 sugarbeet price-support benefits: Proportion of U.S., regional, and State benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	Gini concentration ratio [2]
New York	2.7	6.7	15	25	75	62	45	31	4.8	.381
Ohio	3.3	9.2	17	27	73	57	41	27	5.2	.327
Illinois	2.9	6.6	16	28	72	51	34	22	2.7	.290
Michigan	2.5	7.5	15	25	75	60	45	29	5.4	.373
Northeast	2.4	7.5	15	25	75	60	44	29	5.2	.366
Minnesota	4.2	9.9	20	32	68	56	38	24	3.9	.279
Iowa	2.5	7.4	18	33	67	49	30	15	1.5	.232
North Dakota	5.0	10.7	22	38	62	47	34	21	3.6	.208
Nebraska	3.6	8.0	18	31	69	56	38	24	3.7	.293
Kansas	3.3	7.3	17	29	71	57	40	28	7.2	.327
Texas	3.9	9.5	17	35	65	47	33	22	3.7	.234
Montana	3.0	8.8	17	29	71	53	38	24	3.7	.293
Wyoming	2.8	8.1	16	27	73	55	41	25	4.6	.323
Colorado	3.1	6.7	14	27	73	61	43	30	7.3	.367
New Mexico	6.0	12.8	24	42	58	39	24	13	1.8	.115
Utah	1.7	4.6	10	20	80	69	51	34	7.6	.458
Central States	2.5	5.8	15	26	74	56	41	27	5.4	.345
Nevada	0.8	4.2	9	16	84	71	54	35	3.9	.494
Washington	3.8	7.9	16	29	71	58	41	27	5.0	.328
Oregon	2.8	6.2	12	24	76	63	45	31	7.4	.396
California	1.5	4.1	10	19	81	66	53	36	5.5	.468
Idaho	2.3	6.2	11	21	79	66	51	35	9.0	.446
West	2.0	4.6	10	18	82	68	55	38	9.1	.487
United States	1.9	5.0	10	21	79	66	51	36	9.9	.457

Sources: (a) Acreage planted and farm number distributions for individual States for 1965 are from the records of the USDA's Farmer Programs Division of ASCS. For California, 1964 distributional data was used since 1965 data was not available.

(b) For computing the weights used in combining the State distributional data of source (a), production figures were obtained from Sugar Reports, USDA, ASCS, No. 177, February 1967, p. 27; processor payments per ton (season average prices) were obtained from p. 32.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

these programs, you will see that the lowest 40 percent of farmers received much less than a proportionate share of the program benefits. In fact, at any proportion of beneficiaries from the lower 60 percent on down, far less than a proportionate share of benefits are received. In a typical program such as peanuts the numbers suggest that it would be necessary to generate about $10 of program benefits for every $1 going to the bottom 40 percent of peanut farmers. In rice it would take almost $18 for every one going to the bottom 40 percent. Even in the case of direct payments in wheat or feed grains it would require $6 to $7 of expenditure for each dollar going to the lowest 40 percent of these farmers.

If one is more concerned with the hard core poor at the very bottom of the distribution, the same table suggests that it would be necessary to generate from $20 to $100 of benefits for each dollar going to the lowest 20 percent of farmers. Over a very wide range of decision rule criteria that one might apply, the same conclusion results. The efficiency of distribution of these programs as instruments of low income policy is exceedingly low.

What do these program distributions mean in terms of their impact on the level of welfare of low income farmers? This question cannot be answered unless we have a measure of the present distribution of income among beneficiaries for comparison with distributions of program benefits. Ideally one should

TABLE 52.—*Distribution of total 1965 sugarbeet benefits, price-supports; and Government payments: Proportion of U.S., State, and Puerto Rican benefits received by various percentiles of farmer beneficiaries* [1]

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of total benefits received by the—									Gini concentration ratio [2]
	Lower 10% of farmers	Lower 20% of farmers	Lower 33% of farmers	Lower 50% of farmers	Top 50% of farmers	Top 33% of farmers	Top 20% of farmers	Top 10% of farmers	Top 1% of farmers	
New York	2.7	6.7	15	25	75	62	45	31	4.8	.381
Ohio	3.3	9.2	17	27	73	57	41	27	5.2	.327
Illinois	2.9	6.6	16	28	72	51	34	22	2.7	.290
Michigan	2.5	7.5	15	25	75	60	45	29	5.4	.373
Northeast	2.4	7.5	15	25	75	60	44	29	5.2	.366
Minnesota	4.2	9.9	20	32	68	56	38	24	3.9	.279
Iowa	2.5	7.4	18	33	67	49	30	15	1.5	.232
North Dakota	5.0	10.7	22	38	62	47	34	21	3.6	.208
Nebraska	3.6	8.0	18	31	69	56	38	24	3.7	.293
Kansas	3.3	7.3	17	29	71	57	40	28	7.2	.327
Texas	3.9	9.5	17	35	65	47	33	22	3.7	.234
Montana	3.0	8.8	17	29	71	53	38	24	3.7	.293
Wyoming	2.8	8.1	16	27	73	55	41	25	4.6	.323
Colorado	3.1	6.7	14	27	73	61	43	30	7.3	.367
New Mexico	6.0	12.8	24	42	58	39	24	13	1.8	.115
Utah	1.7	4.6	10	20	80	69	51	34	7.6	.458
Central States	2.4	5.8	14	26	74	56	41	27	5.4	.346
Nevada	0.8	4.2	9	16	84	71	54	35	3.9	.494
Washington	3.8	7.9	16	29	71	58	41	27	5.0	.328
Oregon	2.8	6.2	12	24	76	63	45	31	7.4	.396
California	1.5	4.1	10	19	81	66	53	36	5.5	.468
Idaho	2.3	6.2	11	21	79	66	51	35	9.0	.446
West	1.9	4.5	9	18	82	69	55	38	9.1	.488
United States	2.0	5.0	10	21	79	66	51	36	9.9	.456

Sources: (a) Acreage planted and farm number distributions for individual States for 1965 are from the records of the USDA's Farmer Programs Division of ASCS. For California, 1964 distributional data was used since 1965 data was not available.

(b) For computing the weights used in combining the State distributional data of source (a), production figures were obtained from Sugar Reports, USDA, ASCS, No. 177. February 1967, p. 27; processor payments per ton (season average prices) and government payments per ton were obtained from p. 32.

[1] This table presents portions of two Lorenz curves relating the cumulated percentage distribution of benefits to the cumulated percent of farmers receiving those benefits. Columns 1 through 4 summarize this relationship cumulated up from the lower (benefit per farmer) end of the curve, and columns 5 through 9 summarize the relationship cumulated down from the top (highest benefit per recipient) end of the curve.

[2] For an explanation of the Gini concentration ratio see section on procedure in this paper.

have the income distribution of cotton producers for comparison with cotton program benefits, and similarly for all the rest of the programs. However, the only thing immediately available for this purpose is a measure of the Lorenz curve of the net money incomes of farmers and farm managers estimated by Boyne (*2*). This is presented in the top line of table 54 where it can be compared with similar Lorenz distributions for the various programs. It appears that at the level of the lowest 40 percent of farmers only the tobacco and sugar beet programs have the effect of adding proportionately more of program benefits to a farmer's income than he commands as a share of farm income, generally. That is, they receive 11.7 percent of farm income, but a higher percentage than this of tobacco and sugarbeet program benefits.

The lowest 20 percent of farmers receive 3.2 percent of net farm money income. But they receive more than 3.2 percent of the benefits of the wheat, peanuts, tobacco, and sugarbeet program. Rice, feed grains, cotton, and sugarcane all distribute to the lowest group less of a share of program benefits than they average as a share of farm income. One is tempted to say that these latter programs are regressive in their income impact in farming, but this is not proved by this crude though relevant comparison. Nor can we argue conclusively that the sugarbeet and tobacco (and possibly peanuts and feed grains) programs have a progressive income

TABLE 53.—*Distribution of total 1965 sugarbeet benefits, price supports, and Government payments: Proportion of U.S., regional, and State benefits accruing to farmers with acreage allotments under or over various specified sizes*

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Percent of benefits accruing to farmers with allotments									
	Under 5 acres	Under 10 acres	Under 25 acres	Under 50 acres	Under 100 acres	Under 200 acres	200 acres and over	300 acres and over	400 acres and over	500 acres and over
New York	0.3	4.7	32.1	67	89	100	0.0	0.0	0.0	0.0
Ohio	0.1	1.9	30.1	68	92	99	0.8	0.0	0.0	0.0
Illinois	0.5	6.2	25.7	83	100	100	0.0	0.0	0.0	0.0
Michigan	0.2	3.1	28.2	62	88	98	2.0	0.0	0.0	0.0
Northeast	0.2	2.8	29.0	65	90	99	1.5	0.0	0.0	0.0
Minnesota	0.0	0.0	0.2	7	46	80	20.2	5.8	1.5	0.0
Iowa	0.0	0.0	2.1	8	42	100	0.0	0.0	0.0	0.0
North Dakota	0.0	0.0	0.5	12	70	95	5.4	1.9	0.0	0.0
Nebraska	0.0	0.2	6.9	41	79	98	2.3	0.4	0.0	0.0
Kansas	0.0	0.0	0.2	7	38	75	24.7	11.1	9.3	7.3
Texas	0.0	0.1	1.9	17	78	94	5.8	1.1	0.0	0.0
Montana	0.0	0.1	3.3	26	71	95	5.5	0.5	0.0	0.6
Wyoming	0.0	0.1	3.4	25	65	93	6.5	1.6	0.9	0.9
Colorado	0.0	0.4	8.7	39	73	90	9.7	5.4	3.7	2.6
New Mexico	0.0	0.0	0.9	19	96	100	0.0	0.0	0.0	0.0
Utah	1.0	7.2	30.6	59	87	97	3.4	2.6	2.6	2.6
Central States	0.1	0.6	6.1	28	68	91	9.2	3.5	1.9	1.2
Nevada	0.1	0.1	1.0	13	23	50	50.2	38.2	21.9	0.0
Washington	0.0	0.2	9.7	44	78	95	5.0	0.6	0.0	0.0
Oregon	0.0	0.4	9.2	33	67	92	7.6	3.8	3.8	3.8
California	0.0	0.0	0.8	5	20	47	53.4	37.2	25.6	18.4
Idaho	0.1	1.2	15.2	41	68	85	14.9	7.6	4.5	3.0
West	0.0	0.4	6.5	22	44	66	33.9	22.3	15.1	10.9
United States	0.1	0.7	8.2	28	57	79	21.3	12.9	8.5	6.1

Sources: (a) Acreage planted and farm number distributions for individual States for 1965 are from the records of the USDA's Farmer Programs Division of ASCS. For California, 1964 distributional data was used since 1965 data was not available.

(b) For computing the weights used in combining the State distributional data of source (a), production figures were obtained from Sugar Reports, USDA, ASCS, No. 177. February 1967, p. 27; processor payments per ton (season average prices) and government payments per ton were obtained from p. 32.

impact—even though our data seem to suggest this.

There are too many difficulties in the data. Cotton benefit distributions should be compared with cotton farmer income distributions—not all farm income. Or, at least some regionalization of the farm income distribution is needed to allow for geographic differences. Also one cannot assume that one is necessarily dealing with the same general set of low incomes, or indeed with low income at all, when one speaks of the low end of the distribution of benefits from a program. While it may be fairly reasonable to assume that a small cotton allotment represents a small farmer, such an assumption is not reasonable in the case of wheat or feed grains. Farmers do grow more than one commodity typically, and a small allotment may just represent a minor enterprise in a substantial operation.

Thus, the net effect of these programs may be less regressive than the data suggest—or possibly more regressive.

It also should be noted that all of the program benefit distributions involving price supports are gross, while the income distribution used for comparison in table 54 is a net income distribution.

Nevertheless, it is fairly clear that even with allowance for wide error in our data these farm programs as designed are not highly efficient instruments for assuring some minimum level of living to the lower income groups in farming. They were designed for quite other purposes.

TABLE 54.—*Distribution of farm income and various program benefits: Proportion of income or benefits received by various precentiles of farmer beneficiaries*

Item	Percent of benefits received by the—						Gini concentration ratio
	Lower 20% of farmers	Lower 40% of farmers	Lower 60% of farmers	Top 40% of farmers	Top 20% of farmers	Top 5% of farmers	
Farmer and farm manager total money income, 1963 [1]	3.2	11.7	26.4	73.6	50.5	20.8	.468
Rice, 1963 [2]	1.0	5.5	15.1	84.9	65.3	34.6	.632
Wheat, 1964:							
Price supports	3.4	8.3	20.7	79.3	62.3	30.5	.566
Diversion payments	6.9	14.2	26.4	73.6	57.3	27.9	.480
Total benefits [3]	3.3	8.1	20.4	79.6	62.4	30.5	.569
Feed grains, 1964:							
Price supports	0.5	3.2	15.3	84.7	57.3	24.4	.588
Diversion payments	4.4	16.1	31.8	68.2	46.8	20.7	.405
Total benefits [3]	1.0	4.9	17.3	82.7	56.1	23.9	.565
Cotton, 1964 [2]	1.8	6.6	15.1	84.9	69.2	41.2	.653
Peanuts, 1964 [2]	3.8	10.9	23.7	76.3	57.2	28.5	.522
Tobacco, 1965 [2]	3.9	13.2	26.5	73.5	52.8	24.9	.476
Sugarcane, 1965 [4]	1.0	2.9	6.3	93.7	83.1	63.2	.799
Sugarbeets, 1965 [4]	5.0	14.3	27.0	73.0	50.5	24.4	.456

Sources: Except as noted, all figures are from the Lorenz curve and Gini concentration ratio computations previously presented, although previous tables were not set up on quite the same heading intervals.

[1] David H. Boyne, Changes in the Income Distribution in Agriculture, *Jour. Farm Economics*, Vol. 47, No. 5, December 1965, pp. 1221–2.

[2] For price-support benefits.

[3] Includes price-support payments and, in wheat, certificate payments as well.

[4] For price-support benefits plus government payments.

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(2) Boyne, David H. "Changes in the Income Distribution in Agriculture." *Farm Econ. Jour.*, 47(5): 1213–1224. Dec. 1965.

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(4) Council of Economic Advisers. *Annual Report of the Council of Economic Advisers*. Washington, D.C., January 1964. (p. 61)

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Chapter 27

Measuring the Effects of U.S. Department of Agriculture Programs on Income Distribution

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Introduction

This paper examines the effects of programs operated by the Department of Agriculture on income distribution of farmers and the general public. Specifically, do the programs help high income people more than low income people, or is the reverse the case? Further, which programs operated by the Department tend to widen the disparity of the income distribution and, conversely, which programs tend to reduce the inequality of the income distribution?

The purposes of this paper are: (1) to present a procedure which may be used to examine the effects of programs on income distribution, (2) to apply that procedure to existing data from the farm operating and farm ownership loan programs, and (3) to apply the procedure to approximate or proxy data for other Department programs for which more detailed data are not available to obtain some indications of the income distribution effects of the programs.

The Department of Agriculture operates a variety of programs for a multitude of purposes. The Department's program structure has 159 separate program elements aimed at 6 major objectives. These objectives are: (1) to supply an abundance of food and fiber together with improved farm income, (2) to assist growing nations and develop new markets, (3) to improve the dimensions of living for all our citizens, (4) to develop the communities of tomorrow, (5) to protect and efficiently use our natural resources, and (6) to utilize science in the service of man.

A number of these programs are specifically aimed at people with relatively low incomes. Other programs are aimed at other target groups. For example, a major objective of a group of programs is to improve the nutrition of the U.S. population. There are components of this major program aimed specifically at poor families—the food stamp and direct distribution programs—and at school age children generally—the school lunch program. With a complex of program objectives and with actions aimed at a variety of target groups, it should be kept in mind that evaluation of a program on the basis of a single criterion—the effect on income distribution—can be misleading and dangerous. Furthermore, programs which may be judged by one criterion to be poor or inadequate may be highly successful when judged by other criteria.

A rigorous analysis of the effects of Department programs on income distribution would require detailed data regarding the income status of the recipients of benefits of all of the Department programs. Unfortunately, the availability of such data is extremely limited. Notable exceptions are the farm ownership and farm operating loan programs administered by the Farmers Home Administration.

Method of Analysis

To obtain a graphic representation of the existing inequality of income distribution, one may first array the units (farms, families, or persons) in ascending order of per unit income and then calculate the accumulative percentages of aggregate population and aggregate income. The plotting of these data results in a Lorenz curve as shown in figure 1.[1]

The shaded area, A, reflects the magnitude of any inequality of income distribution; the larger the shaded area the greater the inequality. In order to readily compare the inequality of income distribution of different populations, or the effect of alternative programs on the income distribution, it is convenient to have a readily quantifiable measure of the degree of inequality. The Gini index is such a measure. The Gini index is defined as the ratio of the area between the diagonal and the Lorenz curve

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[1] Presentation based on paper by Herman P. Miller, *Trends in the Income of Families and Persons in the United States: 1947–1960*, Bur. of the Census, Tech. Paper 8, 1963.

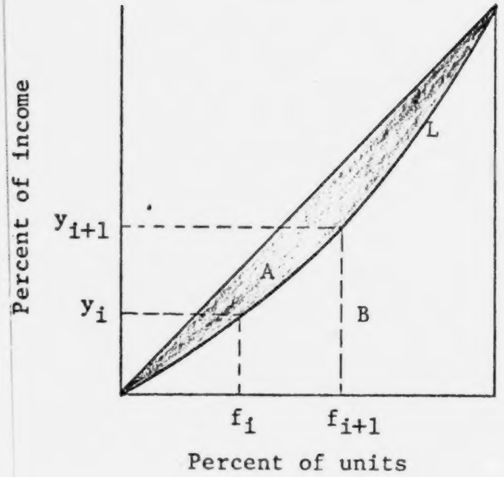

FIGURE 1

to the total under the diagonal. Using the notation in figure 1 above:

$$(1)\quad L = \frac{A}{A+B} = \frac{\text{area between curve and diagonal}}{\text{area under diagonal}}$$

Since the cumulative percents on each axis add to 100, the area in the entire square is 1 and the area under the diagonal is ½. Therefore, the expression above can be rewritten as follows:

$$(2)\quad L = \frac{\frac{1}{2} - B}{\frac{1}{2}} = 1 - 2B$$

If we assume that the curve between any two points is approximated by a straight line, the area for any segment of the curve can be expressed as follows:

$$\left(f_i + 1 - f_i\right)\left(\frac{y_i + y_i + 1}{2}\right)$$

When summed over all intervals, the area under the curve is:

$$(3)\quad B = \sum_{i}^{k} \left(f_i + 1 - f_i\right)\left(\frac{y_i + y_i + 1}{2}\right)$$

Substituting in the expression for L above yields the formula that was used in computing the Gini index:

$$(4)\quad L = 1 - \sum_{1}^{k} \left(f_i + 1 - f_i\right)\left(y_i + y_i + 1\right)$$

Lorenz curves drawn to actual data invariably fall below the diagonal when total income is measured on the vertical axis and the ordering of income recipients on the horizontal axis is from lowest to highest per capita income. Thus, the Gini index computed in this fashion is always positive and can range between the limits of 0 (denoting an equal distribution of income) and +1 (denoting a completely unequal distribution). If, however, the ratio is computed on a part of the income, *with the ordering of income recipients based on total income*, the distribution curve and the inequality coefficient can take on different properties (see fig. 2), and is comparable to the Gini index for total income.

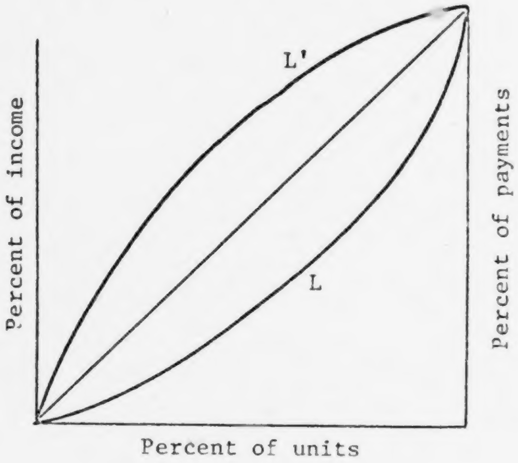

FIGURE 2

Thus, if we plot a payments distribution curve for government payments—a part of the aggregate income of farmers—it is possible that the curve for payments could be represented by L' when plotted against the vertical axis on the right-hand side of figure 2. The Lorenz curve for total income could be represented by L when plotted against the vertical axis on the left-hand side of figure 2. Both curves use the same horizontal axis of percent of recipients ordered by *total* per capita income. Thus, the inequality coefficient for a portion of the aggregate income could take on a negative sign and range between the limits of +1 and —1.[2]

Furthermore, in the partial income case, it is not necessary that the distribution curve be a smooth second-degree curve. It may be a higher degree curve, or it may take on a variety of irregular shapes. Thus, it is conceivable that one could obtain a payments distribution curve as shown in figure 3 with a zero inequality coefficient, or that positive inequality coefficients could be obtained from a payments distribution curve as shown in figure 4 where the positive area (area below the diagonal) exceeds the negative area (the area above the diagonal). In this case it is important to know whether the offset is positive or negative (below or above the diagonal, respectively) as well as the slope of the line at each point or income class interval. A slope of 1.0, i.e., a tangent to the curve (which is parallel to the diagonal line) at any point on the curve can be interpreted as that group of units receiving their pro rata share, i.e., 1 percent of the units receive 1 percent of the payments. Further, the high slope as the curve approaches the diagonal in figure 4 indicates that this income class is receiving much more than their pro rata share of the payments, while the small slope at the top of the curve indicates that the 1 percent of the units with the highest income is receiving virtually none of the payments.

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[2] Note that for the total income case, in equation (2) the area under the curve cannot exceed one-half the area of the rectangle, but in the partial income case the area under the curve can approach the limit of the entire area of the rectangle.

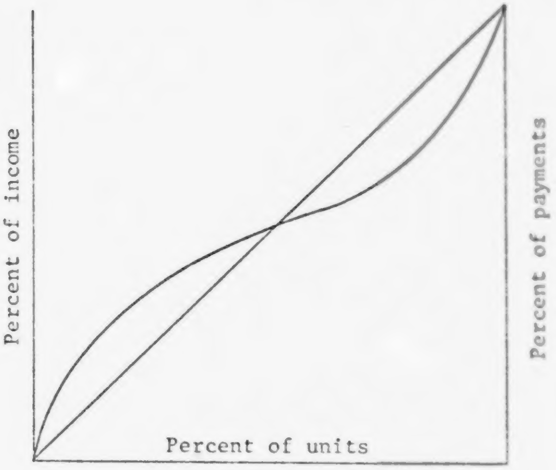

FIGURE 3

In order to determine the effects of payments on income distribution, we can compare the distribution of other income with the distribution of payments. Whenever the inequality coefficient for payments is less than the coefficient for income, the payments tend to make a more equal distribution of income. For example, a coefficient for other income of +0.3 and for payments of +0.1 would indicate that the effect of payments is to give a more equal distribution of income. For more detailed consideration, the slope of the income curve can be compared with the slope of the payments curve for each of several income classes.

Application of Inequality Analysis to Individual Income Data

The Farmers Home Administration of the U.S. Department of Agriculture makes and insures loans to individuals for buying farm real estate and for operating expenses incurred in farming operations. These loans are not specifically limited to low income farmers; however, the loan recipients must be unable to obtain commercial credit in order to be eligible for FHA loans. This requirement indirectly assures that low income farmers will be the major loan recipients.

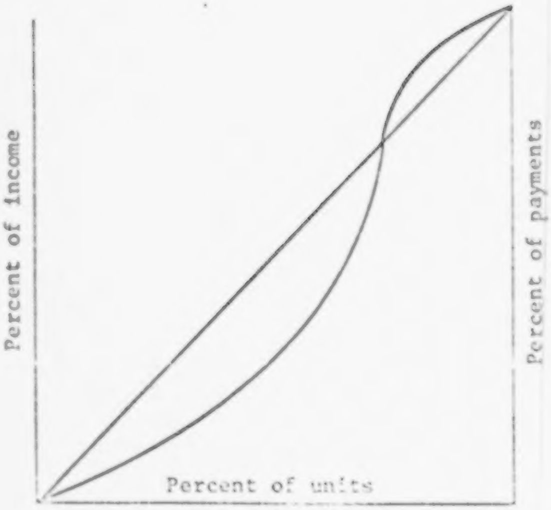

FIGURE 4

Information was obtained for new FHA borrowers receiving ownership and operating loans in fiscal year 1966 which permits a determination of income characteristics.[3] The only readily available characteristic for grouping both "all farms" in the United States and FHA borrowers is an income class based on the value of sales. Four classes were used—under $5,000; $5,000 to $9,999; $10,000 to $19,999; and over $20,000.

The income situation of FHA borrowers receiving loans in fiscal year 1966 was based on the year preceeding the loan. Accordingly, the number of farms and value of sales by sales class for 1965 were used as reported in *Farm Income Situation*, published by the Economic Research Service, USDA.

Table 1 shows the percent distribution of farms, value of sales, and loan levels by sales class and the inequality coefficient for value of sales and loan levels. The percentage distribution shows that 57.1 percent of the farms are in the less than $5,000 sales class and account for only 8.2 percent of the total value of sales, while 13.6 percent of the farms are in the over $20,000 sales class and account for 64.1 percent of the total value of sales. The inequality coefficient for value of sales is .659, indicating a highly disproportionate share of sales to number of farms.

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[3] For an analysis of these data see "Credit and Farm Poverty" by William McD. Herr in Part IV of this report.

TABLE 1.—*Percentage distribution of farms, value of farm sales in 1965, and FHA farm ownership and operating loan levels in fiscal year 1966, by sales classes*

Sales class	Number of farms	Value of farm sales	Farm ownership loan level	Farm operator loan level
Under $5,000	57.1	8.2	34.0	32.8
$5,000 to $9,999	14.7	9.6	24.9	24.6
$10,000 to $19,999	14.6	18.1	27.5	26.8
Over $20,000	13.6	64.1	13.6	15.8
Inequality coefficient:	......	.659	.198	.280

The loan levels for both ownership loans and operating loans are more nearly proportional to the number of farms. The 57.1 percent of farms in the less than $5,000 sales class receive 34.0 percent of the ownership loan funds and 32.8 percent of the operating loan funds. The inequality coefficients are .198 for ownership loans and .280 for operating loans. Both values are substantially smaller than the coefficient for value of sales. An inference is that the farms with less than $5,000 value of sales receive less than their pro rata share of ownership and operating loans, but they receive a far greater share of the loan funds than of cash farm income. Accordingly, the farm ownership and farm operator loans tend to decrease the inequality of farm income distribution.

Application of Inequality Analysis to State Income Data

Data Limitations and Some Difficult Choices

Ideally, the analysis of the effects of USDA programs on income distribution should be based directly on the amounts of loans or payments made to each of several income classes. But this is not always possible.

First, some programs consist of actions taken for a body of people within a certain geographic area rather than selected individuals within the area or community. Examples of such programs are sewer and water loans, the watershed protection and flood prevention programs, the shared revenue program (payments in lieu of taxes) and the rural electric and telephone loan programs. An allocation of the benefits among income classes within the community would be exceedingly arbitrary. One could also classify communities by average personal income or by percent of low income people, but the sphere of influence to be considered a "community" for a program such as watershed protection is greatly different from that for a sewer or water loan program. A rigorous analysis of the income distribution effects of community-type programs would require an intensive study of the stream of benefits, both direct and indirect, that flow out in varying degrees over a wide geographic area to people in a large variety of income situations. Such an intensive study was not possible within the time and resource limitations available for this paper, but it should be emphasized that a need exists for a study of the final incidence of benefits of government programs. It is obvious that community-type programs benefit a large variety of individuals, and programs which involve payments directly to individuals also have effects on the economy of the community.

Second, while many of the programs of the Department do involve payments or loans directly to individuals, present data-reporting systems (with the exception of the farm ownership and farm operating loan programs already noted) do not provide information on the amounts of loans or payments going to each of several income classes (either gross or net, including or excluding government payments).

Thus we were faced with two alternatives: (1) Simply conclude that given the present state of knowledge and data-reporting systems, nothing can be said about the income distribution effects of Department programs, and (2) use somewhat less than adequate data as a proxy for the desired data to obtain some clues or tentative conclusions about the effects of Department programs. We chose the latter course.

Given this decision, a number of difficult choices remain. Among the programs with loans or payments to individuals, two major classes of alternatives are available: (1) Use the average income and amount of payments going to selected geographic areas as a proxy for income and payments received by individuals, and (2) concentrate on sources of income received such as the wheat enterprise and use a single enterprise income as an indicator of total income.

In the first class of alternatives, one could choose the State farm income and number of farmers as proxy variables on the grounds that if low income people received less than their pro rata share of government payments, States with more than their share of low income people (and lower average income) would also receive less than their pro rata share of government payments. There is, of course, a possibility that circumstances could exist in which the inequality coefficient computed on a State basis could be seriously misleading. Assume, for example, a hypothetical program which makes payments only to those farms with more than $20,000 income. Assume further that each of the 50 States contains (1) 2 percent of the farmers of that income class, and (2) 2 percent of all other income classes. Also, assume that the average income in each class in all States is equal. In this case, the analysis would result in an inequality coefficient of zero (implying completely equal distribution of payments), even though low income farmers received no government payments whatsoever.

In the second class of alternatives—the single enterprise approach—a small wheat producer would be characterized as a small or low income farmer even though he received a very high income from other sources such as livestock or feed grains. Thus, a program which gave a high proportion of wheat payments to small allotment holders (indicating a negative inequality coefficient for wheat payments) might actually be giving a high proportion of the payments to middle and high income farmers.

Neither alternative is a satisfying choice. The authors chose the geographic area alternative largely because this method could be more readily adapted if more adequate data become available and because the broad scope of programs to be studied included programs such as housing and food for which the enterprise or source of income approach would not be appropriate. Further, knowledge about the distribution of program funds to high and low income areas is of value in and of itself regardless of any desire to make inferences about the effects of loans or payments on the distribution of personal income.[4]

Within the geographic area approach, a number of choices among alternatives remain. These choices are summarized below:

(1) States were chosen as the geographic area. Counties or census subregions might have been chosen, but it is doubtful that their use would have significantly improved the quality of the inferences to be drawn.

(2) Income statistics are available on a calendar year basis; program expenditure data are on a fiscal year basis. The income measure to be compared with expenditure data was estimated by averaging the income for two calendar years. For example, the income for fiscal year 1960 was estimated by averaging the income in calendar years 1959 and 1960.

(3) Some programs are aimed at rural people and communities such as rural housing and water and sewer system loans, and some are designed to reach low income individuals regardless of place of residence such as food stamp and direct food distribution. For these programs, total population by States, as reported by Bureau of Census, and personal income by States, as reported by Office of Business Economics, Department of Commerce, were used as the comparison base. It would have been preferable to use rural per capita income for each State in connection with the rural community programs. The definition of rural used by the Census is not, however, always consistent with the area designated as rural for the purpose of some Department programs. For example, the sewer and water loans of the Farmers Home Administration can be made to towns and places of up to 5,500 population as compared to the population of 2,500 in the Census definition of rural. But since rural income is available only for the Census definition of rural, per capital State income (combining urban, rural nonfarm, and farm income) was used for all programs not serving farmers alone.

(4) For programs designed to serve farmers, estimates of farm income were used as a standard of comparison. The measure of farm income used was realized net farm income by States as reported by the Economic Research Service, USDA. Total net farm income (realized net adjusted for change in farm inventories) would be preferable, but was not available for 1966. The population of farms used was the number of farms by States as reported by the Statistical Reporting Service, USDA. The decision to use farm income as a standard of comparison for farm programs was motivated by the desire to obtain some clues about the effects of these programs on the distribution of farm income. This decision, however, seriously limited our ability to make inferences about the distribution of program funds among low and high income States. A rank correlation between the ordering of States on a farm income basis and the ordering based on per capita personal income (including both farm and nonfarm people) was significant at the 5-percent level, but quite small.[5] Thus, any inferences about the distribution of farm program funds among low and high income States would be exceedingly tenuous.

(5) Finally, given the choice of these measures, a question arises as to the proper magnitude of these measures. It will be recalled that earlier it was suggested that the comparisons should be made between the distribution of "other" income and the distribution of payments. Three alternative magnitudes of income could have been used: (a) Net income per farm or per capital adjusted for all government payments, USDA or otherwise; (b) net income adjusted for the particular program payment in question; and (c) total net income left unadjusted for government payments of any kind. We chose the last because it was readily available and because the use of State income data did not warrant a precise adjustment of net income. Further, not all government payments can be disaggregated by States to farm and nonfarm populations. The use of the second alternative would require the adjustment of income and the calculation of the in-

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[4] For a paper presenting the enterprise approach, see "The Distribution of Benefits from Selected U.S. Farm Programs," by James T. Bonnen in Part IV of this report.

[5] The correlation coefficients for 1960, 1963, and 1966 were respectively .449, .286, and .332.

equality coefficient for income for each and every program under study.

The General Approach and Interpretation of Inequality Coefficients

This section compares the distribution of program funds among States with the distribution of income for three time periods—fiscal years 1960, 1963, and 1966.

The programs studied were divided into two groups: (1) Those designed to serve farmers, and (2) those designed to serve a broader segment of the population, either a rural community as a whole, or individuals regardless of their place of residence. Two programs—watershed protection and flood prevention—could not be easily placed within this dichotomy. Nor could we allocate the farm and nonfarm share of the expenditures in other than an arbitrary manner. Therefore, these two programs were included in both groups.

Given the limitations imposed by the nature of the data used and the decisions made thus far, two major observations can be made on the distribution of program funds. One observation is simply the inequality coefficient for each program, as a part of aggregate income.

A positive inequality coefficient indicates that a more than proportional share of the program payments is going to high income States. A zero coefficient indicates that program payments are proportional to the number of farms, and a negative coefficient indicates that low income States are receiving more than a proportional share of the program payments.

The second observation is based on the program payments distribution relative to the total net income distribution. The comparison measure is the inequality coefficient for a given program compared to the inequality coefficient for total net income. A smaller value (either a smaller positive value or a negative coefficient) for the program than for total net income would indicate the program tends to reduce the inequality of income distribution among States even though the distribution of the program is less than proportional to number of farmers.

Some programs are aimed at commercial agriculture and for these programs the inequality coefficient would be expected to be positive.

Other programs are aimed at individuals with low incomes and for these programs it is expected that the inequality coefficients would be negative.

Some programs are aimed at low income rural communities and the inequality coefficient would be expected to be negative also.

But the Department also operates a number of multipurpose programs (P.L. 566 projects, for example) which might be expected to have either positive or negative inequality coefficients. If P.L. 566 projects benefit mostly the commercial agriculture, one would expect a positive coefficient when the ordering of States is on a per farm income basis. If P.L. 566 projects are used primarily as a community development device, one would expect a negative coefficient when the ordering of States is on a per capita income basis. To the extent that poor communities and commercial agriculture coincide, one could expect a negative and a positive coefficient when States are ordered on per capita and per farm income, respectively.

Inequality Coefficients for Farm Programs

The inequality coefficients for realized net farm income and for programs primarily benefiting farmers are shown in table 2. The coefficients for realized net farm income remains fairly stable at about .22 during the period studied.

The commodity loans (wheat, feed grains, cotton, all grains, and all commodity loans) go generally to the high farm income States. The inequality coefficient is not only positive; it is more positive for

TABLE 2.—*Inequality coefficients for realized net farm income and for selected USDA programs, computed from State totals*

Program	1960	1963	1966
Realized net farm income	.227	.212	.218
Wheat diversion	.....	.223	.045
Wheat certificates	.....	.....	.190
Wheat all payments	.....	.....	.179
Wheat loans	.516	.520	.253
Feed grain diversion	.....	.203	.179
Feed grain price support	.....	.....	.421
Feed grain all payments	.....	.....	.261
Feed grain loans	.374	.516	.512
All grain payments	.....	.208	.237
All grain loans	.443	.518	.418
Wool payments	.518	.323	.324
All commodity payments	.504	.221	.230
All commodity loans	.422	.378	.308
Cropland conversion	.....	−.011	.211
Conservation reserve	.211	.160	.136
Cropland adjustment	.....	.....	.137
All diversion payments	.....	.....	.224
ACP payments	.108	.073	.071
ACP and GP payments	.127	.092	.085
ACP, GP and ARCP payments	.....	.....	.084
Telephone loans	.125	.024	−.131
All conservation payments	.177	.130	.103
Conservation technical assistance	.212	.136	.116
Watershed protection	.168	.085	.078
Watershed and flood prevention	.129	.059	.044
Farm operator loans	.175	.143	.168
Farm ownership loans	.090	.131	.144
Production loans	.168	.157	.165
Commodity and production loans	.383	.342	.272
Electric loans	.112	.150	.051
Realized net farm income [1]	.250	.239	.238
Cotton diversion	.....	.....	.248
Cotton price support	.....	.....	.116
Cotton, all payments	.....	.....	.223
Cotton loans	.637	.362	.445
Realized net farm income [2]	.213	.200	.172
Sugar payments	.287	.169	.099

[1] Computed on the basis of 20 States receiving cotton program payments and loans.

[2] Computed on the basis of 23 States receiving sugar program payments.

the loans than for the realized net farm income, indicating that the high income States have a higher proportion of the loans than they do of farm income.

Diversion payments (wheat, feed grains, and cotton) are generally distributed in much the same manner as income. Wheat diversion payments in 1963 and cotton diversion payments in 1966 went slightly more to high income States, but all other diversion payments were distributed slightly more to low income States than was income. The long-term programs (cropland conversion, cropland adjustment, and conservation reserve programs) were also oriented more to the low income States.

All diversion payments (long-term and short-term diversions) were distributed in much the same manner as income.

Cost-share payments (agricultural conservation, Great Plains, and Appalachian Region) were distributed to the low income States proportionally more than was income.

All conservation payments (cost-share programs and the long-term diversion programs) were also distributed to low income States proportionally more than was income.

Conservation technical assistance and the watershed protection and flood prevention programs were all distributed proportionally more to low income States than was income. The last two programs have two target groups, farmers and communities, and these two programs should also be compared to per capita income. This is also true of the electric and telephone loans.

The operating loans and farm ownership loans were distributed more to low farm income States than was income. This is also true of production loans (farm operating, farm ownership, soil and water, irrigation, drainage, and emergency loans).

But if commodity loans are added to production loans, the total of these loans is distributed more to high farm income States than is income.

More specifically, in 1966, over $1,422 million of payments were made under programs whose inequality coefficient was greater than for income, indicating that these payments tended to increase the inequality of farm income distribution among States. These programs were (1) cotton and feed grain diversion programs (2) wool program, and (3) feed grain price-support payments.

Also, in 1966, nearly $3,383 million of loans were made under programs whose inequality coefficient indicated that these loans tended to increase the inequality of income. Of this approximate $3.4 billion, about $3.3 billion consisted of commodity loans for cotton, feed grains, and wheat and the remainder was made up of loans for (1) soil and water, (2) land conservation and development (3) grazing, (4) irrigation and drainage, and (5) farm labor housing.

In contrast, again in 1966, there were over $2,031 million of payments under programs whose inequality coefficient indicated that the payments tended to reduce the inequality of income among States. These programs were: (1) Conservation operations, (2) watershed protection,[6] (3) resource conservation and development,[6] (4) Great Plains diversion assistance, (5) feed grain diversion payments, (6) wheat diversion payments, (7) cotton price-support payments, (8) ACP cost share, (9) emergency conservation measures, (10) cropland conversion programs, (11) conservation reserve, (12) cropland adjustment program, (13) Sugar Act, (14) milk indemnity payments, and (15) wheat marketing allocation payments.

In addition there were over $34 million of payments that had negative inequality coefficients, indicating that more of these payments went to low income States. These payments were made under the flood prevention and Great Plains cost-share programs.

Among the loan programs in 1966, there were over $810 million of loans made under programs whose inequality coefficient indicated that they tend to reduce the inequality of income. These included loans for (1) commodities other than feed grains, wheat and cotton, (2) farm ownership, (3) farm operating, (4) economic opportunity, (5) flood prevention,[7] and (6) recreation.[7]

Another comparison involves the change in inequality coefficients between time periods for a given program. The wheat program has a high positive inequality coefficient for 1960 and 1963. In 1966, the inequality coefficient is still positive, but not much larger than the realized net farm income inequality coefficient.

The feed grain loan program has two high positive inequality coefficients in 1963 and 1966 with the 1960 inequality coefficient significantly lower. The conservation payments inequality coefficient is highest in 1960 and decreases in 1963 and again in 1966.

Some of this change can be attributed to a change in program emphasis or a change in the mix of all farm programs available. The decrease in the wheat loan inequality coefficient for 1966 corresponds to the wheat certificates and lower loan levels. The increase in the feed grain loan inequality coefficient in 1963 can be partially explained by the diversion payments inducing the higher income States to participate in the feed grain program.

A different ordering of the States because of relative changes in per farm income can have a marked effect on the inequality coefficient. An example of this is the cropland conversion program (land use adjustment in 1963). In 1963, Maine received 18.8 percent of the payments, with only 0.48 percent of total number of farms in the United States. Maine was in the lowest quartile of per farm income in 1963. This contributed significantly to the negative inequality coefficient (—.011). In 1966, Maine received only 5.6 percent of the payments, had 0.46 percent of the farms, but was in the highest quartile of per farm income. The inequality coefficient is positive (.211) and about the same magnitude as farm income.

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[6] The $58 million watershed protection program and $1.8 million RC&D program might be more appropriately judged relative to personal income. In that case, the payments tending to reduce the inequality of income would be only $1.971 million.

[7] The $5.6 million of watershed protection and flood prevention loans and the $15.6 million of recreation loans might be more appropriately judged relative to personal income. In that case, the amount of loans that tended to reduce the inequality of income would be reduced from $810 million to $789 million.

Inequality Coefficients for Nonfarm Programs

The inequality coefficients for programs related to per capita rather than per farm income are presented in table 3. All but four of the inequality coefficients have a negative sign, indicating that low income States received more of the benefits of these programs than their pro rata share. The only exceptions were the special milk program in all 3 years and the shared revenues paid to States (as a result of timber harvest) in 1963.

TABLE 3.—*Inequality coefficients for total personal income and selected USDA programs, computed from State totals*

Item	1960	1963	1966
Total personal income	.108	.103	.094
Watershed protection	−.341	−.311	−.357
Flood prevention	−.565	−.603	−.663
National Forest administration	−.016	−.046	−.124
State and private forest	−.222	−.237	−.272
Shared revenues	−.049	.004	−.065
Telephone loans	−.350	−.428	−.531
Electric loans	−.425	−.407	−.445
Watershed loans		−.615	−.453
Rural housing loans	−.524	−.547	−.501
Sewer and water loans		−.353	−.455
Rural housing and senior citizen loans		−.548	−.497
All housing loans			−.483
All nonagriculture loans	−.415	−.458	−.475
Direct distribution to needy		−.281	−.274
Community facility loans		−.377	−.465
Community facility loans and technical assistance		−.314	−.408
Food stamp		−.154	−.238
Food stamp and direct distribution to needy		−.269	−.262
Special milk	.074	.053	.049
National school lunch	−.196	−.189	−.230
NSLP, special milk and direct distribution to schools	−.102	−.127	−.144

As was suggested earlier, the watershed protection and flood prevention programs have rather high negative inequality coefficients. The same situation was found for all the nonfarm loan programs.

The community facility loans (watershed protection, recreation, sewer and water loans) go more to the low income States than to high income States.

The relatively small negative inequality coefficients for the food stamp and commodity distribution programs arise from the fact that high-income States such as California, Illinois, Michigan, and New York have large numbers of low income people.

The school programs in total go more to low income States than to high income States, even though the special milk program goes slightly more to the high income States.

The forestry payments (administration, State and private forests, and shared revenues) are largely determined by the location of forests and woodlands. Nevertheless, it is of interest that most of these payments go to low income States.

Specifically, in 1966, over $575 million was dispersed under programs whose inequality coefficient was negative, indicating that most of these disbursements went to low income States. These programs included food stamp, commodity distribution to needy families, school lunch, and watershed protection and flood prevention programs.

In addition, there was nearly $761 million of loans dispersed under programs whose inequality coefficients were negative, indicating that the bulk of these loans went to low income States and, therefore, tended to reduce the interstate inequality of income. These loan programs included (1) electric and telephone, (2) rural housing, (3) senior citizen housing, (4) recreation, (5) sewer and water, (6) watersheds, and (7) rural renewal and resource conservation and development.

The only major program which went primarily to high income States was the approximately $97 million special milk program. But even this tended to reduce rather than increase the inequality of income distribution.

A More Detailed Look at the Distribution of Payments

As was suggested in figures 3 and 4, the inequality coefficient for government payments or for any partial income case may be misleading. An area under the equality line may be at least partially offset by an area above the line. Thus, it would be desirable not only to know if this has occurred, but also to know how well each State or income class has shared in payments from USDA programs. The computer routine used for the calculation of the inequality coefficients did provide such information by States, but the presentation of State information would be too voluminous for the purposes of this paper.

Alternatively, the population was divided into income quartiles. The poorest group is referred to as the first quartile and the highest income group is referred to as the fourth quartile. Thus, by looking at the cumulative percentages received by the first, second, and third quartiles, one can determine if the payments curve has crossed the equality line in a major way. For example, if the first quartile received 20 percent of a program payment, but the first two quartiles received 52 percent of the program payments, it is apparent that the payments curve was below the equality line in the first quartile, and then swung above the equality line in the second quartile. Thus, the inequality coefficient as the sum of a positive and negative area would not adequately reflect the distribution of payments.

The estimate of the percentage of payments received by each quartile reveals whether or not that quartile received its pro rata share of the payments. Thus, in the above example the first quartile received 20 percent of the program payments (less than its pro rata share) while the second quartile received 32 percent of the program payments (more than its pro rata share).

The programs for which the payments curve crosses the equality line in a major way are shown in tables 4 and 5.

In the case of the 1966 wheat diversion program the small positive inequality coefficient suggests that more of the payments went to the high income States. But the quartile distributions reveal that the small positive inequality coefficient is made up of a large positive portion in the first quartile (the low quartile received less than their pro rata share), a very large negative portion in the second quartile (the second quartile received much more than their pro rata share), a small negative portion early in the third quartile, and a positive portion in the remainder of the third and fourth quartiles. Thus, the small positive inequality coefficient resulted in spite of the much greater than pro rata share received by the second quartile.

The negative inequality coefficient for the 1963 cropland conversion program (called land use adjustment program at that time) is a result of more than a proportional share to the lower one-half of the distribution, extending part way into the third quartile and with the remainder of the third quartile receiving less than its pro rata share. The fourth quartile, on the other hand, received more than its pro rata share.

The inequality coefficient for the 1963 and 1966 watershed protection and flood prevention programs are also misleading because the payment curve crosses the equality line, giving a net positive inequality coefficient even though the lowest quartile receives more than its pro rata share.

The inequality coefficient for sugar payments is positive and relatively small. The percent distribution by quartiles shows that the small positive inequality coefficient consists of a small negative portion in the first quartile, a large positive portion in the second and third quartiles, and finally 60 percent of the program payments in the fourth quartile. The inequality coefficient suggests a pro rata share in program payments when in fact a disproportionate share went to the high income States receiving sugar payments. This disproportionate share suggests that a high proportion of sugar payments went to a relatively few large producers.

The four nonfarm programs for which the payments inequality coefficients are misleading are presented in table 5.

For the National Forest administration payments, the negative coefficient, indicating that the

TABLE 4.—*Farm programs for which the inequality coefficients for payments are misleading*

Program	Inequality coefficient	Percentage of payments received by [1]—			
		Lowest quartile	Second quartile [2]	Third quartile [2]	Fourth quartile
1966 wheat diversion	0.045	19	34(53)	20(73)	27
1963 cropland conversion	−0.011	26	25(51)	23(74)	26
1963 watershed protection	0.085	26	16(42)	25(67)	33
1966 watershed protection	0.078	27	20(47)	21(68)	32
1963 watershed protection and flood prevention	0.059	28	16(44)	21(65)	35
1966 watershed protection and flood prevention	0.044	28	22(50)	23(73)	27
1960 sugar payments	0.074	28	9(37)	3(40)	60

[1] States ordered by per farm net income.

[2] Figures in parentheses are cumulative percentages.

TABLE 5.—*Nonfarm programs with misleading inequality coefficients* [1]

Program	Inequality coefficient	Percentage of payments received by [1]—			
		Lowest quartile	Second quartile [2]	Third quartile [2]	Fourth quartile
1960 National Forest administration	−0.016	24	34(58)	14(72)	28
1960 shared revenues	−0.049	19	47(66)	21(87)	16
1963 shared revenues	0.004	18	9(27)	61(88)	14
1966 shared revenues	−0.065	16	53(69)	19(88)	11

[1] States ordered by per capita personal income.

[2] Figures in parentheses are cumulative percentages.

low income States receive more than their pro rata share, is due to the second quartile receiving much more than their share even though the highest quartile received slightly more than their share.

The inequality coefficient for the 1960 shared revenue program (payments in lieu of taxes for forest lands) was slightly negative not because the low income quartile received more than its pro rata share (which it did not) but because the second quartile received about half of the total payments. This was also true of the 1966 shared revenue program. In 1963, the inequality coefficient was slightly positive because the less than pro rata shares received by the first, second, and fourth quartiles were nearly offset by the large negative area associated with the third quartile receiving much more than its pro rata share.

In all other cases, the inequality coefficients presented in tables 2 and 3 appropriately describe the inequality of payments.

In table 2 (farm programs), all the inequality coefficients are positive except for the 1963 cropland conversion program (called LUAP at that time), and the 1966 telephone loan program. For all programs with positive inequality coefficients, except those shown in table 4, there were no major offsets by negative areas and the lower one-half of the income distribution received less than its pro rata share. Of the two programs with negative inequality coefficients, only the 1963 cropland conversion program is misleading, as noted in table 4, and for both the cropland conversion program and the 1966 telephone loan program, the lower one-half of the income distribution received more than its pro rata share.

In table 3 (nonfarm programs), with the exception of the 1963 shared revenues program and the 1960, 1963 and 1966 special milk program, all the inequality coefficients were negative, indicating that the low income States received more than their pro rata share. For all programs with negative inequality coefficients, except those shown in table 5, there were no major offsets by positive areas and the lower one-half of the income distribution received more than its pro rata share, usually more than two-thirds of the total payments. For the four programs with positive inequality coefficients, only the 1963 shared revenue program had a major negative offset as shown in table 5, and in all four programs including the 1960, 1963, and 1966 special milk programs, the lower one-half of the income distribution received less than its pro rata share.

Comparisons of the Distribution of Payments and the Distribution of Income by Quartiles

Farm Programs

The detailed comparisons of farm program payment and income distribution are shown in table 6. The program payments are shown as differences between the percentage of payments and the percentage of income received by each quartile. For example, in the 1963 wheat diversion program, the lowest quartile received 2 percent more of the payments than they did of income, or 17 percent of payments. Likewise, the second quartile received 7 percent less of the payments than they did of income or only 14 percent of the payments. Thus a positive sign in a program row of table 6 indicates a greater share of payments than of income going to the quartile in question.

The inequality coefficient column is interpreted in a smilar manner. For example, the coefficient of inequality for the 1966 wheat diversion payments is .173 less than the coefficient of inequality for realized net farm income. Thus the effect of the wheat diversion payments in 1966 was to reduce the inequality of income distribution.

The inequality coefficient column of table 6 reveals that most of the programs tended to reduce the interstate inequality of farm income. The exceptions among the individual programs are: (1) 1963 wheat diversion payments, (2) wheat loans in 1960, 1963, and 1966, (3) 1966 feed grain price-support payments, (4) feed grain loans in 1960 and 1963, and (5) wool payments in 1960, 1963, and 1966. The exceptions among the aggregates of several programs are: (1) price-support and diversion payments for grains in 1966, (2) all grain loans in 1960, 1963, and 1966, (3) all commodity price-support and diversion payments, (4) all commodity loans, (5) all diversion payments in 1966, and (6) all loans (production and commodity) for 1960, 1963, and 1966.

For a more detailed look at the income distribution effects of individual programs on each quartile, the reader may want to study columns 1, 2, 3, and 4. For example, among the 50 program rows in table 6 that tend to reduce the interstate inequality of income distribution (negative signs in the coefficient column), 9 actually give a lesser percentage of the payments to the first quartile than the percentage they receive of realized net farm income. These 9 include 6 individual programs: (1) 1966 wheat certificates, (2) 1963 feed grain diversion payments, (3) 1966 feed grain diversion payments, (4) 1960 conservation reserve, (5) 1963 sugar payments, and (6) 1966 cropland conversion. The remaining 3 are aggregates of individual payments—all payments for wheat in 1966, all grain diversion and price support payments in 1963, and the aggregate of production loans in 1966. It should be noted, however, in none of these 9 programs does the percentage of payments exceed 6 percent less than the percentage of income.

In the second quartile, among the 50 program rows which reduce the interstate inequality of income, there are 14 in which the percentage of payments received by the second quartile is less than the percentage of income, but in no case does the

TABLE 6.—*A comparison of the distribution of farm income and the distribution of USDA programs; 1960, 1963, and 1966*

Program and year	First quartile	Second quartile	Third quartile	Fourth quartile	Inequality coefficient
Realized net farm income:					
1960	15	20	25	40	.227
1963	15	21	25	39	.212
1966	15	20	26	39	.218
Wheat diversion:					
1963	2	−7	5	0	.011
1966	4	14	−6	−12	[1] −.173
Wheat certificates:					
1966	−3	14	−8	−3	−.028
Wheat, all payments:					
1966	−3	14	−7	−4	−.039
Wheat loans:					
1960	−14	−9	−2	25	.289
1963	−8	−18	−6	32	.308
1966	−2	2	−5	5	.035
Feed grain diversion:					
1963	−2	2	1	−1	−.009
1966	−1	3	1	−3	−.039
Feed grain price support:					
1966	−11	−5	−1	17	.203
Feed grain all payments:					
1966	−4	0	0	4	.043
Feed grain loans:					
1960	−11	−8	19	0	.147
1963	−13	−11	1	23	.304
1966	−14	−12	4	22	.294
All grain payments:					
1963	−1	0	1	0	−.004
1966	−4	5	−3	2	.037
All grain loans:					
1960	−12	−9	9	12	.216
1963	−11	−14	0	25	.306
1966	−10	−6	0	16	.200
Wool payments:					
1960	−8	−10	−11	29	.291
1963	0	−13	5	8	.111
1966	−6	−5	11	0	.106
All commodity payments:					
1960	−10	−5	−11	26	.277
1963	−1	−1	1	1	.009
1966	−3	4	−1	0	.012
All commodity loans:					
1960	−11	−7	6	12	.195
1963	−7	−8	1	14	.166
1966	−6	−1	4	3	.090
Cropland conversion:					
1963	11	4	−2	−13	[1] −.223
1966	−6	9	−7	4	−.007
Conservation reserve:					
1960	−2	−2	5	−1	−.016
1963	3	−1	3	−5	−.052
1966	4	0	3	−7	−.082
Cropland adjustment:					
1966	4	−4	−1	1	−.081
All diversion payments:					
1966	−2	1	0	1	.006
ACP payments:					
1960	6	1	−2	−5	−.119
1963	8	1	−1	−8	−.139
1966	8	2	0	−10	−.147
ACP and GP payments:					
1960	5	1	−3	−3	−.100
1963	7	0	0	−7	−.120
1966	7	2	0	−9	−.133
ACP, GP and ARCP payments:					
1966	7	2	0	9	−.134
All conservation payments:					
1960	1	−1	2	−2	−.050
1963	5	−1	2	−6	−.082
1966	5	3	1	−9	−.115

See footnotes at end of table.

TABLE 6.—*A comparison of the distribution of farm income and the distribution of USDA programs; 1960, 1963, and 1966*—Continued

Program and year	First quartile	Second quartile	Third quartile	Fourth quartile	Inequality coefficient
Conservation technical assistance:					
1960	2	−3	0	1	−.015
1963	7	−5	3	−5	−.076
1966	6	1	1	−8	−.102
Watershed protection:					
1960	1	4	−3	−2	−.059
1963	11	5	0	−6	−.127
1966	12	0	−5	−7	−.140
Watershed and flood prevention:					
1960	3	5	−6	−2	−.098
1963	13	−5	−4	−4	−.153
1966	13	2	−3	−12	−.174
Farm operator loans:					
1960	0	2	2	−4	−.052
1963	3	−2	8	−9	−.069
1966	1	−1	6	−6	−.050
Farm ownership loans:					
1960	6	0	9	−15	−.137
1963	3	0	7	−10	−.018
1966	2	2	−2	−2	−.074
Production loans:					
1960	1	1	3	−5	−.059
1963	2	−1	8	−9	−.055
1966	−1	4	2	−5	−.053
Commodity and production loans:					
1960	−9	−6	6	9	.156
1963	−5	−8	2	11	.130
1966	−5	0	4	1	.054
Telephone loans:					
1960	2	2	2	−6	−.102
1963	10	2	−2	−10	−.188
1966	20	3	−2	−21	−.349
Electric loans:					
1960	6	2	−4	−4	−.115
1963	8	−5	−2	−1	−.062
1966	7	7	−5	−9	−.167
Realized net farm income: [2]					
1960	14	19	23	44	.250
1963	14	19	24	43	.239
1966	14	19	31	35	.238
Cotton loans:					
1960	−10	−10	−22	42	.387
1963	−9	8	−2	3	.123
1966	−8	−14	14	8	.207
Cotton diversion:					
1966	−3	−8	9	2	.010
Cotton price support payment:					
1966	9	−1	2	−10	−.122
Cotton price support and diversion:					
1966	1	−5	6	−2	−.015
Realized net farm income: [3]					
1960	15	22	23	40	.213
1963	15	21	26	38	.200
1966	16	22	25	37	.172
Sugar payments:					
1960	13	−13	−20	20	[1].074
1963	−4	2	10	−8	−.031
1966	5	7	−9	−3	−.073

[1] These programs have somewhat misleading inequality coefficients as discussed in earlier sections.

[2] Computed on the basis of 20 States receiving cotton program payments and loans.

[3] Computed on the basis of 23 States receiving sugar program payments.

percentage of payments exceed 5 percent less than the percentage of income.

Among these 14 program rows, there are 9 individual programs: (1) the 1960 conservation reserve program, (2) the 1963 conservation reserve program, (3) the 1966 cropland adjustment program, (4) conservation technical assistance in 1960, (5) conservation technical assistance in 1963, (6) farm operator loans in 1963, (7) farm operator loans in 1966, (8) electric loans in 1963, and (9) cotton price-support payments in 1966. The remaining 5 program rows are aggregates of individual programs: (1) all conservation programs in 1960, (2) all conservation payments in 1963, (3) watershed protection and flood prevention in 1963, (4) all production loans in 1963, and (5) cotton price-support and diversion payments in 1966.

In contrast to the 50 program rows in table 6 that tend to reduce the interstate inequality of income distribution, there are 31 program rows that tend to exaggerate the existing inequality of income distribution. Among these 31 are 16 individual program rows, 13 because the share of payments received by the first quartile was below the percentage of income. The three exceptions were: (1) the 1963 wheat diversion payments, (2) the 1963 wool payments, and (3) the 1960 sugar payments.

All of the 15 program rows in table 6 that are aggregates of individual programs and whose distribution of payments tended to exaggerate the inequality income distribution did so because the share of payments received by first quartile was below the percentage of income received by the quartile. In contrast, only 10 increased the inequality of income because the share of payments received by the second quartile was below the percentage of income received by that quartile.

Nonfarm Programs

The more detailed data regarding the nonfarm programs are presented in table 7.

The interpretation of the figures in table 7 is the same as for table 6. For example, in the 1960 water-

TABLE 7.—*A comparison of the distribution of personal income and the distribution of USDA programs; 1960, 1963, and 1966*

Program and year	First quartile	Second quartile	Third quartile	Fourth quartile	Inequality coefficient
Total personal imcome:					
1960	19	23	27	31	.108
1963	19	24	26	31	.103
1966	19	24	27	30	.094
Watershed protection:					
1960	34	1	−15	−20	−.449
1963	29	4	−15	−18	−.414
1966	32	4	−18	−18	−.451
Flood prevention:					
1960	50	4	−27	−27	−.673
1963	52	2	−26	−28	−.706
1966	65	−10	−26	−29	−.757
National Forest administration:					
1960	5	11	−13	−3	[1] −.124
1963	9	−1	2	−10	−.149
1966	8	16	−13	−11	−.218
State and private forest:					
1960	22	4	−11	−15	−.330
1963	23	0	−6	−17	−.340
1966	21	8	−10	−19	−.366
Shared revenues:					
1960	0	24	−6	−18	[1] −.157
1963	−1	−15	35	−19	[1] −.099
1966	−3	29	−8	−18	[1] −.159
Telephone loans:					
1960	21	21	−16	−26	−.458
1963	28	17	−18	−27	−.531
1966	44	6	−23	−27	−.625
Electric loans:					
1960	27	17	−15	−29	−.533
1963	29	11	−12	−28	−.510
1966	32	14	−20	−26	−.539
Watershed loans:					
1963	59	−7	−24	−28	−.718
1966	33	5	−10	−28	−.547
Rural housing loans:					
1960	42	4	−19	−27	−.632
1963	46	−1	−17	−28	−.650
1966	43	1	−19	−25	−.595
Sewer and water loans:					
1963	19	5	7	−31	−.456
1966	38	7	−20	−25	−.549
Rural housing and senior citizen loans:					
1963	46	−1	−17	−28	−.651
1966	42	2	−19	−25	−.591
All housing loans:					
1966	41	2	−19	−24	−.577

See footnotes at end of table.

TABLE 7.—*A comparison of the distribution of personal income and the distribution of USDA programs; 1960, 1963, and 1966—Continued.*

Program and year	First quartile	Second quartile	Third quartile	Fourth quartile	Inequality coefficient
All nonagriculture loans:					
1960	27	16	−15	−28	−.523
1963	34	8	−14	−28	−.561
1966	38	7	−20	−25	−.569
Direct distribution to needy:					
1963	25	1	−6	−20	−.384
1966	29	−3	−11	−15	−.368
Community facility loans:					
1963	25	1	3	−29	−.430
1966	38	7	−20	−25	−.559
Community facility loans and technical assistance:					
1963	23	7	−6	−24	−.417
1966	33	8	−17	−24	−.502
Food stamp:					
1963	9	4	18	−31	−.257
1966	23	−3	−3	−17	−.332
Food stamp and direct distribution to needy:					
1963	24	1	−4	−21	−.372
1966	27	−3	−9	−15	−.356
Special milk:					
1960	1	1	2	−4	[1] −.034
1963	2	0	4	−6	−.050
1966	3	−1	2	−4	−.045
National school lunch:					
1960	20	2	−7	−15	−.304
1963	19	1	−5	−15	−.292
1966	22	2	−9	−15	−.324
NSLP, special milk and direct distribution to schools:					
1960	13	2	−4	−11	−.210
1963	15	1	−3	−13	−.230
1966	16	2	−6	−12	−.238

[1] These programs have somewhat misleading inequality coefficients as discused in earlier sections.

shed protection program the lowest quartile received 34 percent more of the payments than they did of income or a total of 53 percent of the payments. Similarly, the highest quartile received 20 percent less of the payments than they did of income or a total of 11 percent of the payments. The inequality coefficient for the watershed protection programs was 0.449 less than the coefficient for income or —0.341.

A major characteristic of this group of programs is that without exception the inequality coefficients are less for program payments than for income, indicating that these programs tend to reduce the existing inequality of income distribution. In contrast with the farm programs, however, these programs generally provide a higher absolute proportion of payments to the lower quartiles rather than just a higher proportion of payments than of income to the lower quartiles.

Note also that in this group of programs, the highest quartile without exception receives a lower proportion of payments than of income. The range is from 3 percent less to a maximum of 31 percent less payments than income. The former is represented by the 1960 National Forest administration expenses and the latter by the 1963 sewer and water loan and the 1963 food stamp programs.

Even in the third quartile only eight program rows contain positive figures, indicating that a higher proportion of payments than of income was received by the third quartile. These programs were:

1963 National Forest administration
1963 shared revenues
1963 sewer and water loans
1963 community facility loans
1960, 1963 and 1966 special milk

In contrast, the lowest quartile received a higher proportion of payments than of income from all programs except the shared revenue program, and in only 10 program rows does the second quartile receive a lower proportion of payments than of income.

Thus this group of programs can be characterized as those which give a less than pro rata share to the upper half of the distribution and a more than pro rata share to the lower half of the distribution.

Conclusions

It should be emphasized that any conclusions reached about the effect of U.S. Department of Agriculture programs on the existing distribution of income should be regarded as extremely tentative. Existing data reporting systems, with the exception of those for the farm operating and farm ownership loan programs, do not permit the allocation of funds among income classes. The use of State income as a proxy for income class data does, however, give some clues as to the possible effect of Department programs on income distribution among income classes.

The programs operated by the U.S. Department of Agriculture were divided into two groups: (1) those that were primarily aimed at improving the income or well-being of farmers, and (2) those that were aimed at improving the income and well-being of the population generally. The first group was evaluated by determining the distribution of disbursements relative to farm income. The second group was evaluated by determining the distribution of disbursements relative to the personal income of the entire population (including farmers) as of 1960.

The farm programs (the first group) in 1966 involved $3,487 million of payments or services and $4,193 million of loans. Of the $3,487 million of payments or services:

- $1,422 million exaggerated the existing inequality of income distribution.
- $2,065 million reduced the existing inequality of income distribution (including $34 million that actually went more to low income sectors than to high income sectors).

Of the $4,193 million of loans in the first group:

- $3,383 million (largely commodity loans) tended to exaggerate the existing inequality of income.
- $810 million tended to reduce the existing inequality of income.

The second group of Department programs (those aimed primarily at the general population or the rural population) in 1966 involved $672 million of payments and $761 million of loans.

- All of the loans and all of the payments tended to reduce the existing inequality of income.
- All of the loans and $575 million of payments went more to the low income sector than to the high income sector.

These tentative conclusions, perhaps more appropriately called hypotheses, need to be tested further before decision-makers can have a sound basis for evaluating programs or program provisions in terms of their effects on distribution of income.

An appropriate procedure for testing these tentative conclusions would involve:

(1) Establishment of a data reporting system which will provide a comprehensive description of the clientele served by each program. Hopefully, this would include not only such measures as gross income, but also net income, net worth, age, and family characteristics of recipients. Such a reporting system would provide data for evaluating programs on the basis of income distribution and other criteria as well.

(2) Development of a program of research aimed at deriving the final incidence of the benefits through a determination of the indirect, as well as direct, effects of Department programs. Such a research program would include—

(a) Studies which would provide estimates of the impact of alternative levels of payments or loans to individuals on the level of economic activity in the community and the surrounding area.

(b) Studies which would provide estimates of the impact of alternative levels of loans or payments to communities or groups on various income classes within the community. It should be kept in mind that the definition of the community may itself be a subject of research effort as the sphere of influence of some programs would be expected to have greatly different geographic boundaries than others.

The development of such a system of data collection and research should provide much needed information about Government programs and provide a sounder basis for estimating the income redistribution effects of alternative programs on income distribution.

Summary

This paper examines the effects of selected programs operated by the U.S. Department of Agriculture on the income distribution of farmers and the general public. Specifically, the question under consideration is: which programs tend to widen the disparity of the income distribution, and, conversely, which programs tend to reduce the inequality of the income distribution?

The Department operates a variety of programs with a complex of program objectives and with actions aimed at many different target groups. The examination of a program on the basis of a single criterion—the effect on income distribution—can be misleading and dangerous. Programs which may be judged by one criterion to be poor or inadequate, may be highly successful when judged by other criteria.

A rigorous analysis of the effects of Department programs on income distribution requires detailed data about the income position of individuals or communities receiving the program benefits. These data are not generally available. The data used are somewhat less than adequate. State data on farm income and number of farmers for programs designed to serve farmers, and total personal income and total population, for programs designed to serve rural people and communities, were used as proxy variables. These data were chosen on the grounds that if low income people received less than their pro rata share of Government payments, States with proportionately more low income people would also receive less than their pro rata share of Gov-

ernment payments. There is, of course, the very real possibility that a comparison using State data as a proxy for individuals could be seriously misleading.

The method of analysis involved computing a measure of the inequality of income distribution by States and a measure of the inequality of program disbursement by States. The measure of income inequality, called a Gini index, was computed from State income and population data arrayed in ascending order of per unit income. The Gini index can range between the limits of 0 and +1. An index of 0 would mean that each 1 percent of the population received 1 percent of the income or an equal distribution, and a +1 would mean that 1 percent of the population received 100 percent of the income or a completely unequal distribution.

A comparable inequality coefficient can be computed for program payments by keeping the States arrayed in ascending order of per unit income. This coefficient can range between the limits of —1 and +1. A —1 coefficient would mean that the lowest 1 percent of the population in terms of income received 100 percent of the program payments; a 0 coefficient would result when each 1 percent of the population received 1 percent of the program payments; and a +1 coefficient would mean the highest 1 percent of the population in terms of income received 100 percent of the program payments.

Program disbursements by States for fiscal years 1960, 1963, and 1966 were used for this analysis. The programs were divided into two groups: (1) those that were primarily aimed at farmers, and (2) those that were aimed at the population generally. The first group was evaluated by determining the distribution of disbursements related to farm income, and the second group relative to personal income of the entire population.

The results indicate that most of the *farm programs* tended to reduce the interstate inequality of farm income. The apparent exceptions are: (1) 1963 wheat diversion payments, (2) wheat loans in 1960, 1963, and 1966, (3) 1966 feed grain price support payments, (4) feed grain loans in 1960 and 1963, and (5) wool payments in 1960, 1963, and 1966. It should be noted that the major objective of a commodity program is to raise the income level of all farmers producing that commodity, not just those with an income below a certain level. However, there are special provisions for those with a small acreage allotment or base under the current cotton and feed grain programs.

The second group of programs, characterized as *nonfarm programs*, tended to reduce the interstate inequality of personal income without exception. This result is accentuated by comparing personal income distribution to farm income distribution.

Chapter 28

Credit and Farm Poverty

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Credit is widely used in the farm sector. The 1960 Sample Survey of Agriculture indicated that nearly three-fifths of all farmers were in debt. Even though many farmers use credit, debts are concentrated among the larger operators. Thirty-one percent of all farmers had sales of $5,000 or more and they owed 80 percent of the total farm debt (table 1) (*6*).[1] This concentration of farmers with debts raises questions concerning both the use of and the availability of credit to lower income farmers.

Table 1.—*Distribution of farms and total farm debt by debt status and sales class of farm, 1960*

Sales class of farm	Percentage of all farms: With debts	Percentage of all farms: Without any debts	Percentage of all farms: All farms	Percentage of total debt
$5,000 and over...	31	13	44	81
Under $5,000	14	12	26	9
Noncommercial ..	14	16	30	10
Total	59	41	100	100

Source: Hesser, L. F. (*6*).

Recognizing the potential of credit in boosting farm productivity and income, the Federal Government has sponsored or directly operates credit agencies designed to channel funds to agriculture and to make credit available to farmers on satisfactory terms. Of particular importance to low income groups are credit programs designed to permit farmers unable to obtain credit on reasonable terms through commercial sources to realize their potential as productive, self-supporting members of society.

In recent years, renewed concern for farm poverty families has increased the activity of the Farmers Home Administration (FHA). At the same time it has again focused attention on the role of credit as a means of alleviating low farm incomes.

The first part of this paper indicates (1) the extent to which low income farmers use credit, (2) the availability of credit to low income farmers, and (3) reasons for the pattern of credit use observed. This phase of the paper relies heavily on information from the 1960 Sample Survey of Agriculture which, at present, contains the most comprehensive picture available of farm credit use. Data from a similar survey in 1965 were not available for inclusion in this analysis.

The second part of the study examines selected credit programs of the Farmers Home Administration from the standpoint of how they serve the low income segment of agriculture. Special tabulations about characteristics of new FHA borrowers are used extensively for this phase of the study.

The final part of the study indicates the kinds and numbers of low income farmers who would probably be affected by any adjustments made in Government credit programs designed to serve this segment of agriculture.

Use, Availability, and Sources of Credit for Chronically Low Income Farmers

Definition of the Chronically Low Income or Poverty Class

Forty-eight percent of all farm operators reported total net cash income of less than $3,000, according to the 1960 Sample Survey of Agriculture. Total net cash income was defined as the operator's net cash farm income plus off-farm cash income. While much of this analysis implies that the poverty line occurs at a total net cash income of $3,000 in 1960, it is recognized that a given income in a single year is not very satisfactory for defining a chronically low income class. For one thing the average net cash farm income per farm in 1960 was more than 25 percent below levels of more recent years.[2] But even if more recent information were available, the single criterion, net income, does not accurately define those with chronically low incomes. The level of income which serves as a poverty class guideline should be adjusted for such factors as family size, age, and place of residence. Moreover, in any year special circumstances will cause some farmers to have unusually high or low net incomes.

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

[2] Moreover, when the survey data were expanded into national totals, gross income, net income, and debt fall below comparable estimates for 1960 published by the U.S. Department of Agriculture. While this understatement must be considered in interpreting the results, it is generally believed that the data can safely be used to compare the situations of major groups of farmers. A more complete discussion of sampling errors is given by Garlock (*2*; p. *2*) and Garlock and Allen (*3*).

For example, the group of commercial farmers reporting net losses in 1960 operated farms averaging 867 acres and valued at more than $90,000 though less than half of the real estate was owned. These amounts of resources about matched those used by commercial farmers having annual sales of farm products from $20,000 to $39,999 (Economic class II farms). It is not likely that many of these commercial farmers reporting negative incomes in 1960 can be looked upon as poverty or low income farmers.

In a similar fashion some farmers may have had unusually good incomes in 1960 and were classed in a higher group than would be justified on the basis of their longer term average income. While it is not possible to make adequate allowances for all of these temporary shifts, some adjustments can be made to obtain a clearer picture of the characteristics of a chronically low income group.

Two kinds of farmers were deleted from the group with total net cash income of under $3,000 on the grounds that the size of their operation or the amount of resources they own indicates they were not part of a chronically low income or poverty class. One group of farmers had cash farm sales of $10,000 or more in 1960. These farmers operated units having an average value of land and buildings of over $85,000 of which more than $30,000 was owned. Operators of these farms averaged 46 years old and were judged to be operating viable farms capable of earning adequate family incomes in most years but temporary adversity lowered returns in the survey year.

The other group of farmers omitted were those who owned relatively large amounts of real estate. This group was defined as owning $25,000 or more of farm real estate. While it may have been desirable to use a somewhat higher value of owned real estate, even at this relatively low minimum the average value was $45,000; and, including rented land, they operated farms worth nearly $50,000. These operators averaged about 55 years old. While these farmers had low net cash incomes in 1960, the amount of resources they control would not place them among the destitute.

Together, these two groups of farmers accounted for 325,000 farmers, or about one-fifth of the total number of farmers reporting total net cash incomes of under $3,000 in 1960 (table 2). The average size of the farms temporarily having low incomes exceeded that of operators reporting total net cash income of $3,000 or more whether size was measured by the value of land and buildings, acres operated, or cash farm sales. The remaining 80 percent having low net cash incomes in 1960—1.2 million farmers—were believed to largely constitute the chronically low income or poverty class of farmers. They operated farms having an average value of less than $12,500 and gross cash sales averaged less than $2,500.

Credit Use Among Farmers With Chronically Low Incomes

Some characteristics of credit users and nonusers with chronically low incomes compared to those with a total net cash income of $3,000 or more are shown in table 3. Less than half of the low income farmers reported debts compared to nearly two-thirds of the higher income farmers. A low incidence of debt among the low income group was particularly apparent for real estate credit. Only 35 percent of the low income farmers with debt were using real

TABLE 2.—*Selected characteristics of farms with total net cash income above and below $3,000, 1960*

Item	Total net cash income			All income groups
		Under $3,000 with—		
	$3,000 and over	Chronically low income	Temporary low income [1]	
Number of farmers (thousands)	1,697	1,225	325	3,247
Percent of farmers in class	52	38	10	100
Percent reporting debt	65	46	70	58
Averages per farm:				
Value of land and buildings operated	$54,009	$12,327	$68,664	$39,753
Value of land and buildings owned	$34,978	$ 6,291	$37,243	$24,381
Acres operated	432	121	535	325
Cash farm sales	$13,510	$ 2,463	$12,984	$ 9,291
Net cash farm income	$ 3,777	$ 678	$ 680	$ 2,223
Nonfarm cash income	$ 3,701	$ 729	$ 720	$ 2,282
Total net cash income	$ 7,478	$ 1,407	$ 1,400	$ 4,505

[1] With gross farm sales of more than $10,000 or owning land and buildings valued at $25,000 or more in 1960.

TABLE 3.—*Selected characteristics of farms with total net cash income of $3,000 or more compared to farms with chronically low incomes, by debt status, 1960*

Item	Total net cash income			
	$3,000 or more		Under $3,000 [1]	
	With debts	Without debts	With debts	Without debts
Number of farms (thousands)	1,105	592	564	661
Percent of operators in class	65	35	46	54
Average age of operator	46	54	50	57
Percent with real estate debts	55		35	
Percent with non-real-estate debts	79		85	
Average per farm:				
Value of land and buildings operated	$56,109	$50,091	$14,676	$10,322
Value of land and buildings owned	34,033	36,740	6,551	6,068
Amount of real estate debt (land and buildings)	6,867	0	1,234	0
Owner-equity in land and buildings	27,166	36,740	5,317	6,068
Acres operated ....number	451	399	145	101
Average value per acre operated	$ 124	$ 126	$ 101	$ 102
Value of products sold	$15,007	$10,718	$ 2,959	$ 2,038
Net cash farm income	3,921	3,488	681	676
Off-farm income	3,534	4,010	702	752
Total net cash income	7,455	7,498	1,383	1,428
Operator's cash sales per $1 of cash expense	1.41	1.56	1.42	1.69
Dollars per $100 of land and buildings operated:				
Cash farm sales	27	21	20	20
Operator's share of farm sales	24	19	16	16
Cash expenses	17	12	11	9
Net cash farm income	7	7	5	7

[1] Excludes 325,000 farmers reporting total net cash income of under $3,000. These farmers were excluded on the grounds that 1960 incomes were temporarily depressed. (See table 2.) Of those excluded, 96,000 reported no debts and 229,000 reported debts.

estate credit but 85 percent reported non-real-estate debts.

Farm business characteristics of operators not using credit indicate that, as a group, they are about as eligible for credit as those reporting outstanding debts. For example, within each income class total net cash incomes are about the same for credit users as nonusers, and on the average nonusers have larger equities in real estate than credit users.

Moreover, earning ability of farmers not using credit as measured by net cash farm income per $100 of land and buildings operated or by operator's cash farm income per $1 of cash inputs is at least as good as for those with debts. This provides some evidence that the group of operators not using credit have farming abilities which would permit them to obtain credit. It appears from these major economic characteristics of the farm business that many farmers not using credit at the time of the 1960 sample survey could have obtained credit if they had actively sought it.

Some indication of the reason for a less active demand for capital and credit on the part of nonusers is also shown by the data in table 3. Farmers reporting no debts outstanding at the time of the 1960 sample survey were older,[3] farmed smaller units, and operated their farms less intensively than did operators with debts. Less intensive operations (indicated by the ratio of cash expenses to the value of real estate) occurred even though the productivity of real estate as indicated by value per acre was about the same. These differences occurred between users and nonusers of credit whether their total net cash income was above or below $3,000.

This explanation for nonuse of credit which centers on the weakness in farmer demand also helps account for the relatively lower use of real estate credit than non-real-estate credit among low income farmers. The chronically low income group are older than those with incomes of $3,000 or more. If the demand for farm resources wanes with advancing age, as frequently occurs, operators could be expected to first reduce their use of longer term real estate credit, which is usually incurred for relatively large expansion or adjustment programs. On the other hand, use of short-term operating credit could be expected to continue as an integral part of many farm operations not undergoing substantial change in size or organization.

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[3] A model of capital rationing related to age and some empirical evidence that older operators demand much less credit than they could obtain is given by Hesser (*5*).

A further indication that nonuse of credit might be largely linked to a weakness in farmer demand is obtained by dividing the group of chronically low income farmers into two subgroups of "older" and "younger" farmers. Farmers were placed in the older or more stable group if they were 65 years or more of age or if they had operated the same farm for 10 years or more. The younger or more active group was made up of operators under 65 or those having shorter tenure on the same farm.

By far the largest number of chronically low income farmers not using credit are those in the older group (table 4). Their average age was 62, and they owned land and buildings having an average value of about $7,200. While sales per $1 of cash expenses or per $100 of land and buildings operated suggest that additional inputs may yield high returns, most of these farmers are not likely to demand much credit. Probably, most can be regarded as being semiretired and not actively desiring to improve the earnings from their farms. Moreover, with total net cash income of less than $1,500 many may not wish to assume the risk of incurring a debt. Some people with low income view possible income losses as being more important than possible gains, hence they tend to take no action which could change their status quo.

The younger group of chronically low income farmers not using credit own farms having even lower average values, about $2,900. Many are tenant farmers, as the average value of real estate operated is $9,300 of which only about 30 percent is owned. More than half of their total net cash income of less than $1,400 comes from farming. With such a small credit base, it is likely that additional physical as well as managerial resources are needed if their income from farming is to improve.

The available information does not clearly indicate why these younger farmers were not using credit. A larger number of young farmers with virtually the same equity in real estate, income, and tenure were using credit in 1960. While those without debts operated smaller units, output per unit of annual expenses or per unit of real estate capital was higher than for those with debts. On balance, this comparison of young, chronically low income farmers by debt status does not indicate that their economic characteristics are so weak as to preclude them from obtaining credit. Instead, it seems likely that certain other characteristics not considered such as race, low educational attainment, little farm

TABLE 4.—*Selected characteristics of two groups of chronically low income farmers by debt status, 1960*

Item	Older group [1]		Younger group [2]	
	With debt	Without debt	With debt	Without debt
Number of farmers (thousands)	341	484	223	177
Percent of operators in class	41	59	56	44
Percent with real estate debt	39	——	30	——
Percent with non-real-estate debt	84	——	88	——
Average age of operator	55	62	43	45
Averages per farm:				
Value of land and buildings operated	$13,842	$10,686	$15,951	$ 9,325
Value of land and buildings owned	8,191	7,241	4,045	2,866
Amount of real estate debt	1,144	——	1,372	——
Owner-equity in land and buildings	7,047	7,241	2,673	2,866
Acres operated ....number	147	105	143	87
Value per acre operated	$ 94	$ 102	$ 111	$ 107
Value of farm products sold	$ 2,865	$ 1,882	$ 3,103	$ 2,463
Operator's share of products sold	2,381	1,624	2,148	1,710
Cash farm expenses	1,677	968	1,502	982
Net cash farm income	704	657	646	728
Nonfarm income	718	798	677	625
Total net cash income	1,422	1,455	1,323	1,353
Operator's cash sales per $1 of cash expenses	$ 1.42	$ 1.68	$ 1.42	$ 1.74
Dollars per $100 of land and buildings operated:				
Farm products sold	$ 21	$ 18	$ 19	$ 26
Operator's share of products sold	17	15	13	18
Cash farm expenses	12	9	9	10
Net cash farm income	5	6	4	8

[1] Annual sales of farm products under $10,000, total net cash income under $3,000, land and buildings owned under $25,000, and operators who were 65 or more years old or had been on the same farm for 10 or more years.

[2] Same as for older farmers except operators were under 65 or were on the same farm for less than 10 years.

experience, or family size may account for their nonuse of credit.

It appears that the characteristics of the younger group of low income farmers are such that if credit is to be used to alleviate their condition, special programs including intensive planning, education, and financial aid are required. For those who have chosen not to go into debt, management advice could show them how to use credit productively. And, for those who demand credit, the added input of management is likely to increase their access to credit.

These results comparing the older and younger farmers by debt status in the chronically low income class indicate that a weakness in farmer demand could account for the bulk of the nonuse of credit among low income farmers. Over 70 percent of the chronically low income farmers not using credit in 1960 were 65 years of age or older or had long tenure on the same farm. But even if credit was made more readily available to this group it is not clear that it would have much impact on alleviating their low income status. The low level of physical resources coupled with the older age of the farm operator suggests that the capacity of the farm to absorb added capital would not be very high. For younger operators with chronically low incomes, additional inputs of education, training, and management advice may be as important as additional amounts of credit.

Amount of Credit Used by Poverty Farmers

Another question associated with credit use is whether users obtain credit in adequate amounts. It is difficult to obtain useful indications of the optimum amount of capital which can be economically employed, and even information concerning amounts lenders would provide according to usual credit standards are sparse. Nevertheless, some indication of the intensity of credit use can be obtained by focusing on different groups of farms reporting debts (table 5).

Compared with indebted farmers whose total net cash incomes averaged more than $3,000, chronically low income farmers with debt utilized about the same amount of real estate credit in relation to real estate owned but used more total credit relative to net cash income. However, the intensity of credit use varied substantially for the two age groups of chronically low income farmers. Older operators utilized real estate credit less intensively than did higher income farmers but the ratio of total debt to net cash income was similar. Younger farmers in the chronically low income group with debt used credit more intensively as measured by the two ratios than either the higher net income group or the older farmers with debt in the chronically low income class.

The relatively heavy debt load indicated by these data for the younger operators does not support the thesis that lower income farmers can obtain only small amounts of credit relative to their financial condition. While it is likely many could use even more credit, the same would likely apply to farmers with net incomes of $3,000 or more. Partly as a result of the relatively heavy indebtedness and risk associated with providing this amount of credit to lower income farmers, some of it may have more restrictive terms and higher interest rates than the credit extended to higher income farmers.

Availability of Credit to Farmers

The 1960 sample survey provides some evidence that chronically low income farmers as a group had nearly the same relative access to credit sources as did higher income farmers. The distribution of the number of farmers by net income class and their major source of credit is similar (table 6).

If credit standards for some institutions were rigorous enough to exclude lower income farmers, it would seem that a smaller portion of the total number of borrowers would obtain credit from such a lender and some other source such as merchants, dealers, or individuals would be relatively more important. While differences of this nature occur, the differences do not appear to be substantial enough to indicate large gaps in the availability of credit to lower income farmers.

The largest differences in the source of credit between lower and higher income farmers with real estate debts occur for insurance companies, banks, and individuals. Only about 4 percent of the chronically low income farmers with a major real estate

TABLE 5.—*Debt ratios for specified groups of farmers with debts, 1960*

Farm operator group	Farmers with debts	Major real estate debt as percent of land and buildings owned	Total debt as percent of total net cash income
	Thousands		
Total net cash incomes $3,000 or more	1,105	20	151
Total net cash incomes under $3,000	793	20	455
Total net cash income under $3,000 but temporarily depressed	229	20	1,664
Total net cash income under $3,000 and chronically low	564	19	180
Older farmers with chronically low incomes	341	14	156
Younger farmers with chronically low incomes	223	34	230

TABLE 6.—*Source of the largest major real estate and non-real-estate debt of borrowers with total net cash income of over $3,000 compared to those with chronically low incomes, 1960*

[Percent of borrowers]

Source of largest debt of borrowers	Farmers with major real estate debt who had total net cash income of—		Farmers with non-real-estate debt who had total net cash income of—	
	Over $3,000	Under $3,000 [1]	Over $3,000	Under $3,000 [1]
Federal land banks	24	20	——	——
Production credit associations	——	——	10	6
Farmers Home Administration	6	7	3	2
Life insurance companies	11	4	2	1
Commercial banks	25	32	36	30
Merchants and dealers	——	——	32	38
Individuals	27	31	8	12
All other	7	6	9	11
Total borrowers	100	100	100	100

[1] Excludes borrowers with total net cash income of under $3,000 who were judged to be only temporarily in the low income class.

debt obtained it from an insurance company. In comparison, about 11 percent of the higher income farmers obtained their major real estate debt from insurance companies. On the other hand, banks and individuals are relatively more important lenders of real estate credit to lower income farmers than they are to farmers with higher incomes.

The distribution of farmers by source of their non-real-estate debt shows that about half of the higher income farmers obtained their short-term credit from institutional lenders. Among the lower income group about two-fifths obtained their short-term credit from institutional sources. Merchants, dealers, individuals, and other sources were relatively more important for the lower income farmers than they were for farmers with higher incomes.

The overall picture does not change much if the analysis is based on the proportion of the total dollar amount of credit outstanding from each source instead of the number of borrowers. Measured by the distribution of the dollar amount outstanding, insurance companies are relatively less important lenders to lower income farmers but land banks become relatively more important. For non-real-estate debt, institutional sources account for over half of the total dollar amount of credit used by lower income farmers but nearly two-thirds of the total to the higher income group.

Partly because resources acquired with credit affect incomes, it is likely that incomes of borrowers with outstanding debts do not indicate income levels at the time the loan was made. Changes in income through time may be particularly large for borrowers with real estate loans because of their larger size and long-term nature and for FHA credit programs whose major objectives are to improve farm incomes. Therefore, a more rigorous examination of the role of credit agencies in providing credit to low income farmers requires information about the borrower's income at the time of the application rather than later when the debt may have been outstanding for some time.

Nevertheless, based on the available evidence, it seems reasonable to conclude that as a group farmers with net incomes above or below $3,000 have reasonable access to a variety of competing credit sources.

Summary and Implications

Data from the 1960 Sample Survey of Agriculture indicate that about 1,550,000 farm operators in 1960 had net cash incomes below $3,000. Of these with low net cash income, about 325,000 were judged to have fallen into this class only temporarily and the remaining 1,225,000 were regarded as having chronically low incomes. Examination of the use of credit by farmers with net incomes of $3,000 or more and those with chronically low incomes provide three main observations:

(1) Relatively fewer low income farmers use credit than higher income farmers. While additional evidence would be useful nonuse of credit appears to be associated with the lack of demand on the part of farmers as much as, or more than, with conditions associated with the availability of credit supplied. Economic characteristics of credit users and nonusers do not differ enough to preclude the use of credit if nonusers actively demanded it. However, it was not possible to appraise adequately certain socioeconomic factors which might affect credit use.

(2) Amounts of credit obtained by lower income farmers are about average relative to owned real estate and large relative to net cash income. About 8 percent of the total farm debt was owed by the chronically low income group which produces about 10 percent of the farm output, employs 8 percent of the annual cash inputs, and owns 10 percent of the total real estate assets (table 7).

(3) Sources of credit used by low income and high income farmers are not greatly different. This indicates that many low income farmers have reasonable access to a variety of competing sources of credit. A more adequate test of the view requires information about individuals obtaining new loans by areas, tenure of farmers, and terms of loans.

While these observations indicate that credit sources in 1960 were about the same for the low income group as the high income group of farmers, they do not indicate anything about the "qualitative" characteristics of the credit provided. Loan terms, including size of loan, downpayments, length

TABLE 7.—*Distribution of all farms, total debt, cash sales, and capital inputs by amount of net cash income class of farm operators, 1960*

Characteristic	Total net cash income			All income groups
	$3,000 or more	Under $3,000		
		Temporarily low [1]	Chronically low [2]	
Number of farms (thousands)	1,697	325	1,225	3,247
Percent of farms in group with debt	65	70	46	58
Percent of total for all farms:				
Number of farms	52	10	38	100
Cash farm sales	76	14	10	100
Cash farm expenses	75	17	8	100
Value of land and buildings owned	75	15	10	100
Total farm debt	75	17	8	100

[1] With gross farm sales of $10,000 or more or owning land and buildings valued at $25,000 or more.
[2] With gross farm sales of less than $10,000 or owning land and buildings valued at less than $25,000.

of loan, renewal privileges, interest rate, and security for farmers in the lower income group may be substantially different from those on loans to farmers with higher incomes. If loan terms are more restrictive to low production farmers than to higher income farmers, as is likely to be the case, low income farmers would find it more difficult to adequately finance the development of their farm unit. However, any move toward more liberal loan terms which reduces the return to lenders, would tend to make commercial credit less available to the higher risk farmers including many with chronically low incomes.

Probably the most substantial gap in farm credit markets is that associated with farmer demand and willingness to use credit. Indications are that most nonusers, whether they have net incomes above or below $3,000, have a credit base about equal to that of some other farmers who use credit and have reasonable access to funds. The weak demand for credit by many low income farmers may reflect rapidly declining returns from capital added to a small resource base and the unwillingness to assume risk. The essential ingredient for many, particularly the younger farmers, is likely to be management and technical advice on how best to use additional resources that credit helps farmers to obtain.

Major Individual-Type Loan Programs of the Farmers Home Administration and Their Contribution in Alleviating Low Farm Incomes

The focus of this part of the study is to determine the amount of new FHA credit which is directly received by individuals with lower incomes. This in turn will help indicate the contribution these credit programs make in alleviating farm poverty. The farm poverty line continues to be defined as a total net cash income of $3,000. Other levels could be used and other definitions such as the amount of income available for family living expenses may be better for some purposes. However, in order to maintain comparability with the analysis in the first part of this study, the net cash income definition was retained. Part of the funds FHA provides each year represents additional credit for some of its borrowers. The analysis largely excludes those "subsequent loans" and emphasizes characteristics of borrowers obtaining an initial loan from FHA.

FHA credit programs can be grouped into seven kinds. Six are largely designed to provide credit to individuals—three real estate and three non-real-estate—and the other includes community service programs. The six individual loan programs account for 85 percent of total FHA credit granted in fiscal year 1966 (table 8). However, only four credit programs are discussed in this paper: (1) farm operating, (2) farm ownership, (3) rural housing, and (4) economic opportunity. Together, these accounted for over three-fourths of the loan activity of the agency in fiscal year 1966. Programs excluded from the analysis and brief explanations for their omission are: (1) the emergency loan program, because the annual volume of loans made and the characteristics of the recipients bear no necessary relationship to the poverty problem; (2) soil, water, and land conservation and development loans, because of the limited nature of the program; and (3) community service credit program, because it does not provide funds directly to individuals.

Farm Operating Loan Program

Operating loans represent the largest FHA credit program in terms of number of borrowers and dollar amount of credit granted in fiscal year 1966. The basic purpose of the program is to provide operating funds to low production farm families for improving farm productivity and family income, and for establishing a viable farm unit. As with other FHA programs, farm planning and management

TABLE 8.—*Total dollar amount of direct and insured loans made by the Farmers Home Administration, by major program, fiscal year 1966*

Program	Amount of loans	Percent distribution
	Million dollars	Percent
Farm ownership	232.2	22
Rural housing[1]	266.4	25
Soil, water, conservation, Appalachia	3.9	([2])
Total individual real-estate-type loans	503.5	47
Operating	276.0	26
Emergency	100.5	9
Economic opportunity	27.3	3
Total individual operating-type loans	403.8	38
Total individual-type loans	907.3	85
Total Community Service Credit Programs[3]	159.2	15
Total all programs	[4] 1,066.5	100

[1] Includes $7.8 million of rental housing loans for the elderly and labor housing loans. While these loans are made to individuals, their benefits accrue to a larger group of rural people and for this reason might be classed as community service programs.

[2] Less than 0.5 percent.

[3] Includes resource development, rural renewal, community facilities, recreation, watershed and shift in land use loan programs.

[4] In addition, grants totaling $22.2 million were made for labor housing and water system planning and development.

advice are an important part of the program. Eligibility is contingent upon not being able to obtain credit from commercial sources on reasonable terms.

The operating loan program shows an almost constant growth rate in the postwar period though some large annual deviations from the trend occur. The dollar value of loans granted increased more than threefold between 1949 and 1966. Even with the rapid growth, FHA operating loans accounted for only about 6 percent of the total non-real-estate farm credit outstanding held by reporting lending institutions in early 1966.

Hathaway (4) summarized the development of the program to 1958 as follows:

> Whereas the program was initially a program primarily intended to serve low-income farmers, successive legislation and administrative policy have made it more nearly a program to serve commercial farmers who for various reasons cannot obtain the credit elsewhere that they need to adjust to the rapid change in agriculture, or who having gotten it have experienced managerial or other difficulties. The increased loan limits, the sharp rise in the average loan size, the authorization of operating loans for refinancing and the slow shift in the distribution of loans toward the high income States all point in this direction.

The remainder of this section focuses on the operation of the program in recent years in order to determine whether it may still be characterized as a program to serve commercial agriculture or whether it makes important contributions to alleviating rural poverty. The main source of information used in this analysis pertains to characteristics of nearly 12,400 new borrowers receiving operating loans in fiscal year 1966.

Characteristics of new borrowers

About one-half of all new borrowers reported gross farm sales of under $5,000 in the year prior to obtaining an operating loan and another 10 percent were not farming at the time they received the loan (table 9). Net earnings from farming for these two groups of operators averaged $600 or less but nonfarm income averaged $2,600. Prior to receiving the loan, nonfarm income accounted for over 80 percent of the total net cash income of these two groups of farmers. It appears that many of these borrowers were largely dependent upon the nonfarm economy. Off-farm income together with the operating loan provided funds either for getting established in farming or for development of a more adequate farm business.

Borrowers with cash farm sales of $5,000 to $9,999 accounted for nearly one-fifth of all new borrowers in fiscal year 1966. These farmers appear to be reasonably established in agriculture, as they have owned assets which averaged about $23,000 and over two-thirds of their total net cash income was derived from farming activities. Their heavy indebtedness prior to obtaining an FHA loan probably made it difficult for them to obtain needed additional amounts of credit from other sources.

The remaining one-fifth of all new borrowers reported cash sales of over $10,000. As a group, these farmers reported good net cash farm incomes but debts were a high portion of their owned assets—amounting to nearly 60 percent. It seems that many of these borrowers encountered financial difficulties requiring debt consolidation coupled with financial advice. Credit demands of many of these larger operators for refinancing plus new operating credit may have exceeded usual credit standards or policies of their local lenders and thereby made them eligible for an FHA operating loan.

All told, nearly two-thirds of the total credit granted new borrowers under this program in fiscal year 1966 went to about 80 percent of the borrowers who had sales of under $10,000 or to those not farming. Looked at in this way it does not seem that the program was primarily oriented to the larger commercial farm. While the bulk of the recipients were part of a low production segment of agriculture, most do not appear to be part of a chronically low income group. Instead, these data suggest that many are young operators who were actively trying to get established in farming or who desire funds for developing their farm into a more viable business.

TABLE 9.—*Characteristics of new FHA borrowers in the year before receiving an operating loan grouped by cash farm sales, fiscal year 1966*

Characteristic	Annual cash farm sales [1] Operator not farming	 Under $5,000	 $5,000-$9,999	 $10,000 and over	 All borrowers
Borrowers:					
Number	1,222	6,271	2,362	2,522	12,377
Percent	10	51	19	20	100
			Average per borrower		
Age ....years	32	44	42	41	42
Owned assets ....dollars	9,500	13,600	23,400	42,500	20,900
Debts ....do	4,800	5,800	12,600	25,100	10,900
Net worth ....do	4,700	7,800	10,800	17,400	10,000
Equity ratio ....percent	49	57	46	41	48
Net cash farm income ....dollars	[2] 400	600	2,900	7,400	2,400
Nonfarm income ....do	4,200	2,300	1,300	1,300	2,100
Total net cash income ....do	4,600	2,900	4,200	8,700	4,500
Percent of income from farming ....percent	7	21	69	85	53
Size of operating loan ....dollars	10,340	4,020	8,000	12,960	7,230

[1] Data pertaining to assets, debts, and income are rounded to nearest $100.

[2] Some farm income for operators classed as not farming at the time of the loan may reflect farm income received earlier in the year or income from farmwork.

Other evidence that many of the borrowers were trying to get established in farming is shown in table 10. Even though nearly three-fifths of the new borrowers had total net cash incomes of $3,000 or more, farm characteristics indicate that these operators were not firmly established in commercial farming. Their gross receipts averaged $8,600, owned assets averaged $26,000, and equities in owned assets averaged less than 50 percent. Many of these young operators—average age 40—augmented farm earnings with off-farm work as nonfarm income averaged about $3,000.

Borrowers with net cash incomes of under $3,000 accounted for about two-fifths of all borrowers and received less than 30 percent of the funds loaned. Even though they had smaller farm businesses than the higher net income group, in many ways they appeared to be more committed to agriculture than did recipients with higher net incomes. Borrowers with less than $3,000 net income were older, equity ratios were higher, and nonfarm earnings were only about one-fourth as much as for borrowers with total net cash incomes of $3,000 or more. In the absence of the FHA operating loan, many with low net cash incomes would be hard pressed to develop their farming operations into a viable unit; and, judged by its low level, nonfarm income seems to offer little potential for this group. For most of these farmers the FHA operating loan therefore appears to help provide necessary resources for improving their income.

TABLE 10.—*Selected characteristics of new borrowers by total net cash income in the year prior to receiving an operating loan, fiscal year 1966*

Characteristic	Under $3,000	$3,000 and over	All income groups
Borrowers:			
Number	5,147	7,230	12,377
Percent	42	58	100
Amount of operating loans made ...million dollars	26.3	63.2	89.5
Percent of dollar amount of loans	29	71	100
		Average per borrower	
Age ....years	45	40	42
Owned assets ....dollars	13,500	26,200	20,900
Total debts ....do	6,300	14,100	10,900
Net worth ....do	7,200	12,100	10,000
Equity ratio ....percent	53	46	48
Cash farm income.dollars	3,400	8,600	6,400
Cash farm expenses....do	2,800	4,800	4,000
Net cash farm income..do	600	3,700	2,400
Nonfarm income ....do	800	3,000	2,100
Total net cash income ....do	1,400	6,700	4,500

Farm operating loans by regions

Nearly half of all new borrowers were located in the South. A mid-1956 study (*1*) indicated that less than two-fifths of all FHA borrowers with outstanding operating loans were located in the South at that time. Thus these more recent data based on new borrowers indicate a greater concentration of recipients in the major low income region than a decade earlier.

An examination of the characteristics of borrowers in three regions of the U.S. indicates that those in the South more nearly represent a chronically low income group than do borrowers in either the North or West. Nearly 90 percent of the southern borrowers reported annual farm sales under $10,000 compared to about 70 percent in the other two regions (table 11). But what may be more important, borrowers with sales under $10,000 in the South seem to be more strongly committed to agriculture than do borrowers in either the North or West. While the level of capital assets and net worth are lower for borrowers in the South than in the other two areas, the proportion of assets owned is higher and borrowers on the average are older. Net cash farm income averages about the same in all areas but nonfarm income is substantially lower in the South. This latter observation may reflect that off-farm jobs are less available in the South than in other regions.

TABLE 11.—*Selected characteristics of new FHA borrowers receiving operating loans by cash receipts and region,*[1] *fiscal year 1966*

Characteristic	South	North	West
Cash receipts under $10,000:			
Percent of borrowers in group	88	71	70
	Average per borrower		
Average age .....years..	45	38	40
Owned assets ...dollars..	11,200	18,300	22,700
Debts ....do..	4,250	10,300	11,400
Net worth ....do..	6,950	8,000	11,300
Equity ratio ...percent..	62	44	50
Net cash farm income dollars..	1,200	1,100	1,000
Nonfarm cash income ....do..	1,700	3,000	2,900
Total net cash income ....do..	2,900	4,100	3,900
Cash receipts over $10,000:			
Percent of borrowers in group	12	29	30
	Average per borrower		
Average age .....years..	43	40	42
Owned assets ...dollars..	31,000	45,400	48,000
Debts ....do..	14,900	28,400	29,200
Net worth ....do..	16,100	17,000	18,800
Equity ratio....percent..	52	37	39
Net cash farm income ....dollars..	7,800	6,800	7,900
Nonfarm cash income ....do..	1,200	1,200	1,500
Total net cash income ....do..	9,000	8,000	9,400

[1] Regions are defined as follows:
North, 18 States including Minn., Iowa, Mo., Ill., Ind., Ohio, W. Va., Pa., N.J., and those to the north.
South, 13 States including La., Ark., Ky., Va., Md., Del., and those to the south.
West, 19 States including N. Dak., S. Dak., Kans., Nebr., Okla., Tex., and those to the west.

These comparisons suggest that many borrowers in the South would likely continue to farm even in the absence of the farm operating loan. However, access to FHA credit may help them develop a stronger farm unit. In the North and West, farmers with sales under $10,000 are younger, have lower equity ratios, and substantial amounts of nonfarm income. These characteristics suggest that many borrowers in these regions are getting established in farming and in the absence of the loan might have expanded their nonfarm activities.

Characteristics of white and nonwhite borrowers in the South

About one-fifth of all new borrowers obtaining operating loans in fiscal year 1966 were nonwhite and more than 90 percent of these were located in the South. As a result of this concentration of nonwhite borrowers in the South, nearly two-fifths of the new borrowers in that region were Negro even though the 1964 Census of Agriculture reported that nonwhite farmers made up less than 15 percent of all farm operators in the South. But this comparison does not necessarily indicate that nonwhite farmers have satisfactory access to FHA credit. Nonwhite borrowers obtained operating loans which average less than one-half that made to white borrowers in the same age-asset class (table 12). However, some of this difference in size of loan probably reflects different opportunities for whites and nonwhites to obtain control over additional amounts of land, which frequently forms part of the base for the operating loan. Also whites and nonwhites may tend to engage in different systems of farming having different credit requirements.

A more adequate appraisal of the amount of credit obtained by Negro and white borrowers requires information on the productivity of capital and the economic capacity of the farms operated by Negroes and whites to profitably utilize additional amounts of capital. While little or no data of this nature are available, one indication is provided by the ratio of cash farm receipts to cash farm expenses. This ratio averaged about the same on farms operated by nonwhites as on those operated by whites and suggests that the marginal productivity of capital was similar.

Summary and conclusions

The analysis of the largest FHA credit program indicates that 70 to 80 percent of the new borrowers in recent years either were not farming or had cash receipts of under $10,000. Even though the majority of borrowers were on low production farms, most did not appear to belong to a chronically low income group. This is especially true in the North and West where borrowers with sales of under $10,000 tended to be young—average age under 40—and the average nonfarm income was about $3,000. These characteristics suggest the hypothesis that in the absence of the FHA operating loan program many might have been able to satisfactorily orient their livelihood toward the nonfarm economy.

In the South, however, the average age for borrowers with sales of under $10,000 was higher, 45, and they received much less nonfarm income. These borrowers appear to be more established and to some

TABLE 12.—*Characteristics of new FHA borrowers receiving operating loans in the South by age, assets, and color, fiscal year 1966*

Class	Borrowers	Owned assets	Net worth	Equity ratio	Net cash farm income	Non-farm income	Total net cash income	Acres operated	Operating loan
	Number			*Percent*				*Number*	
Under 35 years old:									
Assets under $3,000:									
White	173	$1,600	$800	50	$1,300	$1,800	$3,100	60	$5400
Nonwhite	99	1,600	1,100	69	1,000	1,000	2,000	50	2520
Assets $3,000 to $9,999:									
White	386	6,100	3,500	57	1,600	2,300	3,900	100	5160
Nonwhite	93	5,800	3,700	64	1,600	1,600	3,200	100	2560
Assets $10,000 and over:									
White	556	24,700	12,200	49	2,300	3,100	5,400	140	6270
Nonwhite	43	16,700	9,700	58	1,900	2,400	4,300	110	4580
Age 35 to 54:									
Assets under $3,000:									
White	142	1,800	800	44	1,500	900	2,400	90	3170
Nonwhite	373	1,700	1,200	71	1,100	700	1,800	50	1740
Assets $3,000 to $9,999:									
White	526	6,400	4,300	67	2,200	1,600	3,800	120	3740
Nonwhite	580	5,800	4,000	69	1,300	1,100	2,400	80	2240
Assets $10,000 and over:									
White	1,206	26,500	15,200	57	3,000	1,800	4,800	171	5840
Nonwhite	301	18,000	10,900	61	2,200	1,500	3,700	120	3320
Age 55 and over:									
Assets under $3,000:									
White	56	2,000	1,600	80	2,200	600	2,800	80	2340
Nonwhite	226	1,700	1,400	82	900	500	1,400	50	1020
Assets $3,000 to $9,999:									
White	233	6,200	4,600	74	1,400	900	2,300	100	2639
Nonwhite	381	6,000	4,600	77	1,200	700	1,900	80	1490
Assets $10,000 and over:									
White	376	24,300	15,100	62	2,100	1,400	3,600	190	4370
Nonwhite	235	17,100	11,900	70	2,200	1,100	3,300	120	2510

extent "locked-in" the farm sector perhaps because of limited off-farm opportunities in the South. The farm operating loan appears to offer an important means for boosting the incomes of these borrowers. As the operating program appears to include borrowers with less flexibility and opportunity for obtaining off-farm work in the South, the program may be making a larger contribution in alleviating current, as well as evolving, farm poverty situations in the South than in other regions.

About two-fifths of the nearly 12,400 new 1966 borrowers for which information was available reported total net cash incomes of less than $3,000 in the year prior to obtaining their operating loan. Over 60 percent of those with lower net incomes were located in the South. Borrowers with less than $3,000 total net cash income accounted for over half of all borrowers receiving operating loans in the South, whereas the proportion of borrowers reporting similarly low net incomes in the North and West was about 30 percent.

An aspect requiring more careful analysis concerns nonwhite borrowers. A comparison of white and nonwhite borrowers of the same age and assets in the South indicates that nonwhite farmers obtain loans that are only half the size obtained by white farmers.

It is believed that borrowers with cash sales above $10,000 largely had financial management problems. The operating loan program with its supervisory assistance affords a method for these borrowers to consolidate or restructure their debts, or both, as well as to obtain more credit in order to continue their operations. While a substantial portion of the total dollar amount of loans granted is received by these farmers, many of whom are located outside the South, it does not appear that refinancing larger farms has become a dominant part of the program.

Farm Ownership Loan Program

Ownership loans are made to farmers to purchase, improve, or enlarge their farms. At the outset, loans under this program were made for the purpose of increasing the number of owner-operated family farms. The program was subsequently broadened (1946) to include loans for farm enlargement and development. Later authorization (1956) allowed loans on less than family size units and permitted refinancing of existing debts. While the program accounted for over one-fifth of the credit granted by

FHA in fiscal year 1966, it is a small source, about 5 percent, of the total dollar volume of farm real estate mortgages recorded in recent years.

A sharp expansion of this loan program occurred beginning in 1961. The number of borrowers receiving ownership loans rose from a 1949–60 average of just over 3,500 to 4,700 in 1961 and between 11,200 and 13,300 in each year thereafter. Average annual dollar amounts of loans granted through both the direct and insured program rose from under $50 million to $93 million in 1961 and an annual average of $220 million from 1962 through 1966. The expansion after 1960 boosted FHA farm ownership loans share of total farm mortgage recordings from about 2 percent in virtually every postwar year to 5–6 percent starting in the early 1960's.

The major source of information used to indicate the kind of farmers receiving credit under the farm ownership program pertains to borrowers receiving a loan in fiscal year 1966. Selected data about characteristics for nearly 8,100 new borrowers—those not having an FHA loan—are used.

Characteristics of new borrowers

Over 70 percent of new farm ownership borrowers in fiscal year 1966 had cash sales of less than $10,000 or were not farming in the year prior to obtaining their ownership loan. As was true with new borrowers obtaining an FHA operating loan, these borrowers are part of a low production segment of farming but most do not appear to be part of a chronically low income group. While net cash farm incomes were low for all groups except those with sales of $10,000 or more, average nonfarm incomes were generally substantial, particularly for those with sales of less than $5,000 or who were not farming. As a result, total net cash income in the year before receiving the ownership loan averaged $5,600 for all borrowers and $3,900 for borrowers with farm sales of under $5,000.

About 45 percent of the new borrowers in fiscal year 1966 reported sales under $5,000 in the year prior to obtaining their loan (table 13). The 1964 census indicated less than two-fifths of all commercial farms were in this group. The concentration of borrowers in this sales class suggests that the program is primarily oriented to smaller farmers. Many of these farmers can develop their farm as a viable unit only if they obtain a sizable injection of new resources in the form of land or buildings or for development purposes. The average size of loan for this group of borrowers was $13,400 and most of this money was used for acquiring additional resources. Over four-fifths of the initial loans made in fiscal year 1966 were for purchasing land—farm enlargement or development. The remaining loans were for refinancing debts. In earlier years the portion for acquiring or developing resources was smaller.

Other characteristics also suggest that most borrowers are not part of a chronically low income group but are actively engaged in getting more firmly established in farming. About two-thirds were under 45 years of age and about the same proportion had more than an eighth-grade education. Over one-half of all new borrowers owned property worth less than $25,000 and three-fifths extended their control over resources by renting land. If these distributions are compared with characteristics of all farm operators, it is apparent that farm ownership loans are concentrated among former renters, younger farmers, and those with more years of education (table 14).

Negro borrowers comprised only 6 percent of total new borrowers in 1966. While virtually all were located in the South, they account for less than 15

TABLE 13.—*Characteristics of new FHA borrowers in the year before receiving a farm ownership loan, grouped by cash farm sales, fiscal year 1966*

Characteristic	Annual cash farm sales [1]				
	Operator not farming	Under $5,000	$5,000-$9,999	$10,000 and over	All borrowers
Borrowers:					
Number	472	3,619	1,773	2,219	8,083
Percent	6	45	22	27	100
Age ....years	32	41	41	40	40
Owned assets ....dollars	11,400	18,400	30,500	48,400	29,100
Debt ....do	4,200	7,800	14,200	24,300	13,800
Net worth ....do	7,200	10,600	16,300	24,100	15,300
Equity ratio ....percent	63	58	53	50	53
Net cash farm income ....dollars	300	500	2,800	7,500	2,900
Nonfarm income ....do	4,900	3,400	1,700	1,200	2,700
Total net cash income ....do	5,200	3,900	4,500	8,700	5,600
Size of operating loan ....do	16,690	13,400	20,040	26,490	18,720

[1] Data pertaining to assets, debts, and income are rounded to nearest $100.

[2] Some farm income for operators classed as not farming at the time of the loan may reflect farm income received earlier in the year or income from farm work.

TABLE 14.—*Percentage of all farmers and of FHA borrowers receiving farm ownership loans in fiscal year 1966, by age, ownership, and education*

Characteristic	All farmers [1]	FHA borrowers
Age:		
Under 45	35	67
45 and over	65	33
All ages	100	100
Ownership:		
Full owners	58	35
Part-owners	25	32
Tenants	[2] 17	27
All tenures	100	[3] 100
Education:		
8th grade or under	49	34
9th grade or higher	51	66
All grades of education	100	100

[1] Age distribution from 1959 Census of Agriculture, tenure and education from 1964 Census of Agriculture.

[2] Includes managers.

[3] Includes 6 percent of all borrowers who were not farming.

percent of all borrowers in that region. The proportion of Negro borrowers is substantially smaller than in the operating loan program. Negroes obtaining ownership loans tend to be older than white borrowers—70 percent were over 45 and less than 30 percent have had more than 8 years of education.

Farm ownership loans by regions

Borrowers obtaining farm ownership loans in 1966 were fairly evenly distributed among the three regions. (For description of the three regions, see footnote to table 11.) While over half of the borrowers obtaining operating loans from FHA were located in the South, 36 percent of the farm ownership borrowers were in the South. The remaining ownership borrowers were about equally divided between the North and the West.

A mid-1956 study (*1*) indicated that over 45 percent of all FHA borrowers with outstanding ownership loans were located in the South at that time.

A comparison of data from the two studies (each applicable for only a single year) indicates that some shifting of the program away from the major low income region during the past decade may have occurred. Broadening the program to include loans for farm enlargement and refinancing has probably made these types of loans more useful to farmers in the North and West.

Summary

Data for new borrowers obtaining farm ownership loans in fiscal year 1966 indicate that a minority of recipients were in a lower income class. Total net cash income averaged $5,600 for new borrowers obtaining ownership loans. However, not all of the total net cash income is available for family living expenses. Some must be used for debt repayment.

As shown in table 13, total net cash incomes are lower among borrowers with smaller farm sales than among those with larger sales. Approximately two-thirds of all borrowers obtaining farm ownership loans in fiscal 1966 had sales of under $10,000. Total net cash income for borrowers in this group averaged more than $4,000. With total net cash income averaging this amount, it would appear that no more than half of these borrowers (sales under $10,000) or 30 percent of all new borrowers would have net incomes which would fall in a poverty class.

These observations suggest that a small portion of the total credit supplied by this program flows directly to farmers with chronically low incomes. However, considerable amounts may go to farmers on the verge of being in a low income class and to those with heavy debts. Viewed in this way the program makes a contribution in alleviating farm poverty by helping farmers to acquire resources so that they will not slide into a low income class.

Rural Housing Loan Program

The FHA was authorized in 1949 to make loans to farmowners to construct or repair houses and farm buildings. A major revamping of the program occurred in 1961 when nonfarm rural people were made eligible for the loans. This was the first program to be administered by the FHA which extended its activities to nonfarm people. In more recent years the program was extended to provide housing loans for senior citizens, farm labor, rental units for the elderly, and for other special purposes.

In the decade prior to the 1961 revamping, the annual average volume of loans made was $28 million. The amount fluctuated from zero in fiscal year 1955 to more than $50 million in 1958 and 1959. In the 5 years after 1961, the annual average exceeded $160 million, and in fiscal year 1966 the total was $266 million. A considerable amount of this recent expansion occurred after 1965 when Congress more than tripled the funds available and added an insured loan program.

In order to simplify the discussion of the rural housing program, this analysis focuses only on "regular" loans made under section 502 of the Housing Act. This portion of the rural housing loan program accounted for 80 percent of the total number and 90 percent of the dollar volume of loans made in fiscal year 1966 (table 15). One-half of the exclusions are loans made under the senior citizens loan program. Loans under this program were made to persons 62 years of age or older—the average was 69—and almost two-thirds were made in the South.

Focusing on the great bulk of the rural housing loans—those made under the "regular" provision of section 502—about 15 percent were secured by farm

TABLE 15.—*Number and amount of rural housing loans made during fiscal year 1966, by program and farm-nonfarm security*

Type of program	Number of loans	Amount of loans
		Million dollars
Farm tract	4,212	31.9
Nonfarm tract	21,640	207.2
Total of "regular" loans made under section 502	25,852	239.1
Senior citizen	3,253	15.1
Emergency	194	1.7
Self-help	86	.5
Total of "special" loans made under section 502	3,533	17.3
Total, section 502	29,385	256.4
Section 503, association loans	4	*
Section 504, repair loans	2,640	2.2
Rental housing for elderly	81	4.3
Labor housing [1]	22	3.5
Total rural housing	32,132	266.4

[1] Excludes 4 grants totaling $2.2 million.

tracts and the remainder by nonfarm tracts. The proportion secured by farm tracts ranged from 10 percent in the East to 20 percent in the Midwest. However, it is likely that FHA makes more loans to farmers for housing than these figures indicate. A number of houses are built on small tracts split off from the main farm unit and thereby classify as nonfarm, and some loans for housing are made to farmers through the farm ownership loan program. Despite this weakness in the method of identifying farm housing loans, an indication of the income characteristics of homeowners with farm and nonfarm rural housing loans is shown in table 16.

About two-thirds of the rural housing loans secured by farm tracts were received by borrowers having less than $4,000 total net cash income.[4] In contrast, less than 15 percent of the loans secured by nonfarm tracts went to persons with incomes of less than $4,000. For both groups, income is defined as net cash farm income plus cash income from all other sources. Because cash costs of living are lower for farm families than for rural nonfarm families, the economic posture of farm and nonfarm borrowers may not be as different as the data in table 16 suggest.

Evidence that borrowers securing their loans with farm and nonfarm tracts have similar "real incomes" is provided by the FHA classification of borrowers with "low to moderate incomes" and those with "above moderate incomes." This classification is made by FHA in assigning interest rates to rural housing loans. Those in the low to moderate class can obtain insured loans at 5 percent while those in the above moderate income class pay the same rate as families receiving home loans insured by the Federal Housing Administration. The current rate is 6 percent plus one-half of 1 percent for insurance. Family budgets showing only enough cash above living expenses to repay debts are classed as having low to moderate incomes. Borrowers showing surplus funds above living expenses and debt repayment are classed as having above moderate incomes. As this classification takes into account differences in living expenses associated

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[4] Available data do not show the number of borrowers with net cash income below $3,000. Therefore, this part is not entirely comparable to other parts of the paper which usually employed the under-$3,000 level as an indication of low income.

TABLE 16.—*Distribution of borrowers receiving section 502 rural housing loans, by total net cash income [1] and security, fiscal year 1966 [2]*

Security and type of program	Number of loans	Distribution (percent)			
		Under $4,000	$4,000 $5,999	$6,000 and over	All income classes
Farm tracts:					
Insured	3,172	65	17	18	100
Direct	1,040	72	16	12	100
Total	4,212	67	17	16	100
Nonfarm tracts:					
Insured	18,123	11	35	54	100
Direct	3,801	16	38	46	100
Total	21,924	12	35	53	100
Total farm and nonfarm tracts	26,136	21	32	47	100

[1] Total net cash income is defined as net cash farm income plus income from all other sources received by borrower in year before receiving loan.

[2] Based on loan obligations. Numbers differ slightly from those given in table 18.

with family size and place of residence, it may be more indicative of relative status than are measures based solely on income.

When the above definitions are used, 90 percent of all borrowers had low to moderate incomes. This proportion was virtually the same for housing loans secured by farm tracts and for those secured by nonfarm tracts. Regardless of the income classification used, it appears that a large portion of the rural housing loans secured by farm tracts are obtained by persons whose income approaches a minimum level of adequacy. This is less true for borrowers who had rural housing loans secured by nonfarm tracts.

Considering both farm and nonfarm borrowers, the rural housing program seems to be oriented to the group of younger people who usually buy houses. The average age of all recipients was 35 in fiscal year 1966. More than one-third of all borrowers were under 30 and in the East and South the proportion approached two-fifths.

According to the 1960 Census of Housing about 6.4 million occupied housing units in rural areas that were judged "inadequate" (table 17). While current needs are probably smaller than these data indicate, the relative contribution made by the FHA rural housing loan program in meeting this need is small. Only about 25,000 initial loans were made in fiscal year 1966 under the "regular" loan program, though subsequently an additional 7,000 senior citizen, repair, and other "special" housing loans increased the total to about 32,100. This comparison of rural housing needs and number of loans made from this one source helps account for the rapid growth of the rural housing loan program and suggests that future expansion of the program is needed.

Based on the distribution of borrowers receiving initial "regular" loans in fiscal year 1966, housing loans appear to be geographically distributed according to needs (table 17). However, somewhat more rural housing loans were made in the South relative to needs than in other regions. The distribution of loans made in fiscal year 1966 was virtually the same as reported by Hathaway (*4*) for housing loans outstanding at the end of 1958. Expansion of the program during the past 8 years has apparently not altered the geographic allocation of funds very much. Nor has it affected repayments. The relative number of borrowers behind schedule in their payments did not change much between 1961 and 1966. The average for the 6-year period was 8 percent.

Summary and implications

The rural housing loan program was designed for those who couldn't get credit elsewhere. Attractive interest rates and terms have contributed to the growth of the program, but it seems that the main reason for the rapid expansion of loans is that the program makes credit more readily available to help meet the housing needs of rural people. While the program does not contribute directly to improving incomes, it does provide a source of credit for upgrading rural housing and thereby improves the quality of rural living.

This brief look at the characteristics of farm borrowers obtaining loans from the major part of the housing program indicates that two-thirds of the farm borrowers had total net cash incomes under $4,000. However, only 15 percent of all loans are secured by farm tracts. Thus even with a liberal allowance for the inclusion of some farmers among borrowers with their loans secured by nonfarm tracts, less than one-fifth of all rural housing loans appear to be reaching low income farmers. However, an additional amount secured by nonfarm tracts goes to farmers and farm laborers and some loans for housing purposes are made to other farmers through the ownership loan program. These observations indicate that most borrowers, farm and nonfarm, are young; two-thirds have net worths under $5,000; and nearly 90 percent have an income and family living expenditure pattern allowing little or no cash surplus. Thus, judged by these borrower characteristics, housing needs in rural areas, and the rapid growth of the program, it appears that the housing program provides important amounts of credit to rural people who would otherwise find it difficult to improve their housing conditions.

TABLE 17.—*Number of rural farm and nonfarm housing units and FHA initial rural housing loans, by regions*

Region	Occupied housing units [1]	Inadequate housing units [2]	Rural housing loans, fiscal year 1966 [3]	Distribution of— Inadequate housing units	Distribution of— Rural housing loans
	Thousands	*Thousands*	*Thousands*	*Percent*	*Percent*
Northeast	2,444	717	2,291	11	9
North Central	4.582	1,839	5,492	29	22
South	5,961	3,309	15,192	51	62
West	1,717	579	1,719	9	7
Total, U.S.	14,704	6,444	24,694	100	100

[1] Data from 1960 Census of Housing.
[2] Estimated number of houses classified as deteriorating, dilapidated, or sound but without complete plumbing.
[3] Includes initial direct and insured "regular" rural housing loans.

Economic Opportunity Loan Program

The Economic Opportunity loan program was added to the array of FHA activities in 1965. The major purpose of the program is to help low income rural families develop enterprises that would enable them to raise their level of living. Funds must be used primarily to increase earning capacity and hence are largely incurred for financing capital assets. While major programs of the FHA, such as the farm ownership and farm operating programs, are designed to help farmers obtain resources to establish a viable farm capability of providing an adequate standard of living for the family, this program has a more limited objective. Credit is extended to borrowers so they can more nearly reach their potential even though that potential may be low. Eligibility requirements virtually assure that all of these loans go to poverty families.

This section of the report provides a brief description of the recipients in order to indicate (1) how far the program has reached into the poverty class, (2) the proportion going to farmers and nonfarmers, and (3) accomplishments of the program in terms of its objective of raising the level of living of borrowers.

Over 17,000 Economic Opportunity loans were made in fiscal year 1966, of which slightly more than half were for agricultural purposes (table 18). Nearly two-thirds were to individuals with gross cash incomes from all sources of less than $3,000 though the portion below this income level was higher for those obtaining loans for agricultural purposes than for those obtaining loans for nonagricultural purposes. Income available for family living is even lower than these income figures indicate as no deduction has been made for farm expenses.

About three-fifths of all Economic Opportunity loans in fiscal year 1966 were made in the South. The distribution of recipients by income class, assets owned, and net worth all show that in the South a higher portion of loans went to those with the lowest income or smallest amount of resources than did in other regions. In both the East and Midwest, Economic Opportunity loans did not seem to reach as far into the poverty class as they did in the South and West.

The limited potential of most farm recipients is indicated by the small amount of physical and human resources they have acquired. Over half had equity in property of less than $3,000, about two-thirds were 46 years of age or older, and well over half had less than a seventh-grade education (table 19).[5] The combination of low current income and inadequate human and capital resources indicates that most farm recipients have little potential for increasing their level of living by amounts which would provide any more than a minimum standard of living.

The same picture of limited potential emerges for farm laborers and nonfarm unskilled workers receiving Economic Opportunity loans. Only for a group of recipients classed as nonfarm professional —comprising about one-fourth of all Economic Opportunity borrowers—does a picture emerge indi-

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[5] These characteristics of Economic Opportunity borrowers are obtained from a special tabulation of 8,212 loans made to all borrowers in early 1966.

TABLE 18.—*Distribution of Economic Opportunity loans, by regions and gross cash income of borrower in fiscal year 1966*[1]

Purpose and region	Borrowers		Total gross cash income			All income classes
	Number	Percent distribution	Under $3,000	$3,000-$4,999	$5,000 and over	
			Percent	*Percent*	*Percent*	*Percent*
Agricultural purposes:						
East	243	3	32	38	30	100
Midwest	1,245	14	44	36	20	100
South	5,541	61	76	21	3	100
West	807	9	58	32	10	100
Island territories	1,218	13	98	2	([2])	100
Total	9,054	100	72	32	6	100
Nonagricultural purposes:						
East	939	12	38	41	21	100
Midwest	1,245	15	42	36	22	100
South	4,417	55	61	30	9	100
West	974	12	53	36	11	100
Island territories	444	6	57	22	21	100
Total	8,019	100	64	33	13	100

[1] Gross income is the sum of total cash receipts from farming, income from nonagricultural enterprise and all other off-farm income.

[2] Less than 0.5 percent.

TABLE 19.—*Selected characteristics of borrowers, by occupation, obtaining Economic Opportunity loans during the early part of the 1966 fiscal year*

[Percent of borrowers]

Characteristic	Occupation			
	Farmers	Farm laborers and managers	Nonfarm professional	Nonfarm unskilled
Education (highest grade completed):				
Under 6	55	57	28	37
7 or 8	27	21	29	32
High school or more	18	22	43	31
Total	100	100	100	100
Age:				
Under 33	11	30	25	28
34–45	22	27	35	32
46 and over	67	43	40	40
Total	100	100	100	100
Net worth:				
Under $3,000	51	84	60	68
$3,000–$4,999	24	10	19	17
$5,000 and over	25	6	21	15
Total	100	100	100	100
Total number in group	3,189	482	2,259	2,282

cating more than a limited potential for boosting their level of living. While most persons in the group have accumulated little net worth, many tend to be young and have more education than other occupational groups receiving Economic Opportunity loans.

A rough indication of the kind of gains which might accrue from the program is obtained by comparing family living expenses of borrowers with loans for agricultural purposes in the year before the loan to living expenses budgeted for a typical future year which includes the effect of the loan. This comparison indicates a modest upward shift in the distribution of borrowers (table 20). For example, about 83 percent of the borrowers with agricultural loans reported family living expenses under $2,000 in the year prior to the loan. Living expenses of this amount were budgeted in the typical year for 77 percent of the borrowers. Using these data, estimated median family living expenses might be expected to increase from $1,200 to $1,450, a 20-percent gain. While this appears to be a worthwhile increase, annual gains may be modest as the budgeted year may be 2 years away and any gain must be adjusted for increases in living costs. Budgeted increases in living expenses for borrowers obtaining loans for nonagricultural purposes were larger than for borrowers obtaining loans for agricultural purposes.

It is too early to infer much from the repayment record on Economic Opportunity loans, as the program is just getting started. Of the total funds advanced, 6 percent were scheduled to be repaid in full by July 1, 1966. Of the number falling due up to that date only 10 percent were delinquent and they accounted for 13 percent of the total principal

TABLE 20.—*Family living expenses for borrowers with Economic Opportunity loans made during 1966 fiscal year*

[Percent of borrowers reporting]

Purpose of loan and year	Family living expenses			All family living expense groups
	Under $1,000	$1,000-$1,999	$2,000 and over	
Agricultural purposes:				
Reported by year before loan	38	45	17	100
Budgeted for typical future year	19	58	23	100
Nonagricultural purposes:				
Reported for year before loan	15	48	37	100
Budgeted for typical future year	5	38	57	100

amount. However, 23 percent of the borrowers with outstanding credit had delinquent installments, though the portion was somewhat lower for farm borrowers.

Comparison of a few characteristics of 8,212 recipients of Economic Opportunity loans with characteristics of 1,630 applicants who were not granted loans indicates that incomes, ages, and level of educational attainment were not greatly different. In each income class a higher proportion of Negro applicants than white applicants received Economic Opportunity loans. This limited comparison suggests that if the program were expanded and extended to more applicants, it would not likely incur sharply higher rates of delinquency provided inputs of advisory personnel were increased by at least a comparable amount.

Summary

The Economic Opportunity loan program has been in operation only since early 1965 and it is much too early to appraise the results being achieved. From available data—much of the data from the early months of the program which may not be typical of its current operation—the following observations can be made:

(1) In most areas the program is reaching the hard core of rural poverty families. However, the program serves relatively more farm poverty families in the South than in either the Northeast or Midwest. Partly because the program is relatively more important in the South than in other regions, the economic status of borrowers in the South is substantially lower than in other regions. Negro borrowers account for nearly one-fourth of the total number receiving loans for agricultural purposes and virtually all of these are located in 16 Southern States. Available data indicate that Negroes have satisfactory access to Economic Opportunity loans, and average amounts of credit obtained per borrower are not greatly different than for white borrowers.

(2) In absence of aid through the Economic Opportunity loan program (or some other program) available socioeconomic characteristics indicate that many borrowers would probably make little progress in improving their living standards.

(3) Budgeted increases in family living expenses for a typical year after the loan is made show only moderate gains, which suggests that the level of living of many borrowers will remain near a poverty level. These small gains are in part related to the average size of loan, about $1,700 in fiscal year 1966. The maximum size of loan permitted was raised from $2,500 to $3,500 in December 1966.

Looked at from a longer run view, the relative efficiency of aiding this group through a loan program will have to be appraised. Among the questions bearing on this appraisal is whether this type of credit program can be adequately administered by the same agency and personnel who primarily make other types of loans. This may be particularly important when the criteria and expectations for other FHA credit programs may differ substantially from the Economic Opportunity loan program.

Adjusting Credit Programs for Chronically Low Income Farmers

The 1960 Sample Survey of Agriculture showed that 1,550,000 operators, 48 percent of all farm operators in the U.S., had total net cash incomes of under $3,000. However, about 325,000 operators with net cash incomes of under $3,000 were not judged to be in the chronically low income class. These were omitted either because they owned substantial amounts of resources or because it appeared that adversity in the survey year reduced earnings temporarily. This left 1,225,000 operators—38 percent of all farm operators—who were identified as having chronically low incomes (table 2).

Older Chronically Low Income Farmers

About two-thirds of the 1,225,000 farmers identified as belonging to the chronically low income class were either 65 years of age or older or had been on the same farm for over 10 years. Their average age was nearly 60 and the average value of land and buildings operated was about $12,000.

Even though additional inputs may yield relatively high returns on some of these farms, it appears that the remaining span of productive years was too short, or the size of most units operated by these farmers was too small, or both, to profitably utilize enough resources to boost their incomes by very much. Therefore, increasing the flow of production or investment credit to this large group of chronically low income farmers would not seem to be a very satisfactory approach for increasing their incomes.

While credit for productive purposes is not likely to help much in improving levels of living of this older group of chronically low income farmers, some thought might be given to developing a special type of loan program which permits the older operators to convert accumulated equity in owned resources into cash for current use. A loan for these purposes would not be repaid periodically but would be repaid from the proceeds of the estate. Such a program might help older farmers make the transition from active farming similar to special credit programs that help young farmers get established in farming. While this approach seems worthy of exploring, the amount of cash that such a loan would produce may be small as owner-equity in farm real estate averaged less than $7,500 in 1960 for the older farmers with chronically low incomes.

Thus, even considering the latter proposal, individual-type loan programs do not seem to offer a very satisfactory approach for alleviating poverty of these older farm operators. Instead of assigning much of a role for credit as a way of aiding this group of low income farmers, other approaches such as larger social security and welfare payments may prove more satisfactory.

Younger Chronically Low Income Farmers

About one-third, 400,000, of all chronically low income farmers were younger operators—average age 44. Relatively more operators in this group reported using credit than in the older group with low incomes, but the portion in debt was still well below that for operators of more viable farms or with higher total net cash incomes. Of those younger farmers using credit in the lower income group, debts were heavy relative to owned real estate or to total net cash income.

Improving farm incomes may be a reasonable approach for many of these younger farmers. The low level of off-farm incomes—less than $700—suggests that available off-farm opportunities were limited in 1960. Even with generally lower nonfarm unemployment rates in years since 1960, it is likely that many in this group would find it difficult to locate suitable nonfarm work. But improving farm incomes is also difficult, as most need substantial amounts of additional farm resources and their credit base is small. Not only was total net cash income low but many were tenants and the amount of owned resources was small.

Other factors, however, suggest that credit coupled with management advice and supervision can help many in this group improve their farm incomes. The relatively heavy use of credit by those in debt suggests many are already actively attempting to boost their farm earnings. Moreover, ratios of cash receipts to cash expenses or cash receipts to the value of capital invested in land and buildings are about the same as for farmers with higher net incomes. These ratios suggest that returns to additional inputs may also be as high as for farmers with net cash incomes of $3,000 or more. Therefore, expansion of the flow of credit and inputs of managerial advice to this group, so that they can acquire resources to make their farms more productive, appears to be one useful approach for improving their income.

More than other credit institutions serving farmers, the Farmers Home Administration has combined managerial aid and supervision with credit. While most of their borrowers are younger farmers, this analysis indicates that only about 35 percent of all new borrowers obtaining loans in fiscal year 1966 from the four major individual FHA loan programs were farmers with total net cash incomes of less than $3,000 in the year prior to obtaining their loan. About one-fourth of the total funds loaned to all new borrowers through the four programs went to new farm borrowers with low incomes (table 21). With the exception of the Economic Opportunity loan programs, the majority of funds loaned under each FHA program in fiscal

TABLE 21.—*Estimated proportion of initial FHA loans received by farm borrowers with low incomes, fiscal year 1966*

Item	Farm operating [1]		Farm ownership [2]		Rural housing	
	Number of borrowers	Million dollars	Number of borrowers	Million dollars	Number of borrowers	Million dollars
Total loans made (initial plus subsequent loans)	64,743	275	14,279	233	26,136	239
Less subsequent loans made	46,488	159	2,747	27	943	3
Total initial loans made to farmers and nonfarmers [3]	18,255	116	11,532	206	25,193	236
To farm borrowers with low net cash incomes:						
Estimated percent of total initial loans made [4]	41	29	30	20	20	20
Number or dollar amount	7,485	34	3,460	41	5,039	47

Item	Economic Opportunity		Total of four programs	
	Number of borrowers	Million dollars	Number of borrowers	Million dollars
Total loans made (initial plus subsequent loans)	17,073	27	122,231	774
Less subsequent loans made	1,646	1	51,824	190
Total initial loans made to farmers and nonfarmers [3]	15,427	26	70,407	584
To farm borrowers with low net cash incomes:				
Estimated percent of total initial loans made [4]	53	53	34	23
Number or dollar amount	8,176	14	24,160	136

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[1] Loans made during 1966 fiscal year but excluding $1.0 million of loans made with corporation funds.

[2] Based on real estate loan obligations for fiscal year 1966.

[3] About 85 percent of all rural housing loans (initial plus subsequent) were secured by nonfarm tracts and 47 percent of all Economic Opportunity loans were for nonagricultural purposes.

[4] Estimated proportion represents total number of new loans or dollar amount of funds received by farm borrowers with total net cash incomes of under $3,000. See the report on FHA loans.

year 1966 did not reach farmers with chronically low incomes.

Even though this study shows that a large number of new farm operating and ownership borrowers in fiscal year 1966 may have had incomes above a poverty level, credit obtained from these two programs helps prevent many from falling into the chronically low income class. As the main objective of these two programs is to establish viable farms capable of providing adequate family incomes, probably many new borrowers will continue to come from a lower middle income group unable to obtain credit elsewhere, rather than from a chronically low income or poverty class.

Less than 20 percent of the borrowers obtaining rural housing loans were estimated to be farmers with low incomes. The main reason why the proportion is low is that four-fifths of all rural housing loans are made to nonfarmers. While funds from this program do not provide productive resources for increasing incomes, they do make substantial contributions to improved living conditions which in turn may help provide a more favorable environment for other programs designed to alleviate poverty. Estimates indicate that rural housing needs are large relative to the availability of housing credit in rural areas from either FHA or private sources.

Virtually all of FHA's Economic Opportunity loans reach well into the poverty class though many of the loans were not for agricultural purposes. Over 80 percent of the borrowers receiving loans for agricultural purposes in fiscal year 1966 reported cash family living expenses of less than $2,000 in the year before receiving the loan. Thus, even if Economic Opportunity loans, which averaged less than $2,000 in fiscal year 1966, result in relatively large gains, many recipients will remain close to a poverty level for several years unless they also avail themselves of other opportunities.

Conclusion

Credit for production and investment purposes is not likely to play a major role in improving the income of 825,000 older farmers with chronically low incomes. For the 400,000 younger farmers with chronically low incomes, credit can help increase their incomes and level of living. Over half of the younger farmers with chronically low incomes had outstanding debts in 1960. However, of those with debts, less than 5 percent were using FHA credit. While nongovernmental sources provide substantial amounts of credit to this group, it appears that Government sources will have to assume a larger role if credit is to be an increasingly important means used to alleviate their chronic low income. Not only are loan terms from non-Government sources likely to discourage credit use but commercial sources are not likely to provide supervision and management advice required by many of these borrowers.

Estimates given in the previous section show that in one year, fiscal 1966, less than 25,000 FHA farm borrowers receiving new loans had net cash incomes which placed them in a chronically low income group. But this figure overstates the direct role played by FHA in providing credit to young, low income farmers. Some of the low income FHA borrowers were older and others reported low incomes because of temporary adversity. Moreover, an estimated 5,000 rural housing loans received by farmers with low incomes do not directly contribute to improving incomes. These data when compared to the number of "younger" farmers with chronically low incomes who might benefit from a program which supplies credit and managerial aid suggest that alleviating farm poverty through special governmental credit programs of the size operated in fiscal year 1966 will take a long time.

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PART V

Economics of Poverty

Chapter 29

Equivalent Levels of Living: A New Approach to Scaling the Poverty Line to Different Family Characteristics and Place of Residence

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How many Americans are poor? Which areas and population groups have the highest incidence of poverty? How rapidly is the number of poor declining? These and other related questions are at the heart of our economic intelligence and statistics regarding poverty. All these poverty facts and figures are predicated on some objective, quantifiable measure of poverty. At the national level, decisions regarding overall program size, and allocation of funds, as well as measurement of the year-to-year effectiveness of programs, are based on these data. And at the grassroots level, individuals are often denied the benefits of antipoverty programs and aid because their incomes are above some poverty cutoff level of income.

Poverty measurement is usually based on the gap between current income and some standard of what constitutes an "adequate" income. If a family's income is below some specified level—the poverty threshold—that family is deemed to be in poverty. Two basic steps are involved in establishing the poverty thresholds for different categories of families: (1) Setting the general level of the poverty line, and (2) determining a scale by which this level is varied in relation to family size and type, by place of residence, or other factors that may influence the amount of income a family needs to obtain a nonpoverty level of living, as established in step 1. In this paper, we will concentrate on the second step, hoping to devise a method by which a fair and accurate scale may be established, to be applied to one of several possible choices of the general poverty level. Choosing a general level for the poverty thresholds is a value judgment, and as such it is beyond the scope of this technical paper.

Even though our method is geared to income, we recognize that poverty is a complex social and psychological phenomenon, running much deeper than inadequate income. But as long as poverty statistics are based on income it will be necessary to have accurate poverty lines. And if the poverty lines are to be used in ways that intimately affect people's lives, such as their use as family eligibility criteria, then justice requires that these lines be as accurate and fair as possible.

The purpose of this paper is to critically evaluate the currently accepted official poverty scale, to propose an alternative approach, and to present some findings based on this approach. The findings presented here are very tentative, for this is an interim report on a continuing study which is far from complete.

Ideally, the poverty thresholds should perfectly reflect the money needs of each individual family, so that the low income aspect of poverty would be eliminated by bringing each household just above its respective poverty threshold. Such an idealized system would require analysis of individual families, and perpetual day-to-day updating and refinement to take account of arising family problems, availability of goods and services, fluctuating prices, changing consumption patterns, and rising overall standard of poverty level. The family's wealth position and changing value of assets should also be taken into account. Differences in prices and quality of food, clothing, housing, and other items should be taken into account. Quantity variations should also be accounted for—people in colder climates require more fuel, for example. And over a period of time, changes in required income should be calculated, as prices and quantities change, and as the nation's standard of poverty rises.

In practice, poverty lines are calculated for a number of different groups or categories of households whose needs are relatively homogeneous. Sample surveys are used to determine the incomes of the households in each group. The appropriate poverty threshold is then compared with the income of each of the sampled households, and the results are tabulated and summarized to determine the number and percent of "poverty" households in each category.

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The Currently Accepted Method

Early in the 1960's the Council of Economic Advisors began using $3,000 of family income as the general poverty line. Since then a number of refinements have been adopted to take into account the varying income needs of different categories of households. The first such refinement was to use $1,500 rather than $3,000 as the poverty threshold for single individuals living alone. In an attempt to further refine the thresholds, Orshansky devised a set of poverty scales that takes into account the number of family members, the age and sex of the family head, and the place of resident—farm or nonfarm. This poverty scale was designed to center at the $3,000 level previously set by the Council.[1] A nonfarm family of four, for example, would need $3,200 to be above poverty, in 1965. A nonfarm family of seven would need $5,205 (*2*).[2]

The poverty thresholds have been officially adopted by many government agencies, and the tabulations based on these thresholds are widely recognized and quoted. Many State and local welfare agencies have also adopted the Orshansky poverty thresholds as eligibility criteria, despite the fact that she has warned that they were not designed for this purpose and they are not appropriate.

Others have attempted to devise an alternate set of scales.[3] This paper is based on yet another such attempt. Little, if any, attention has been given to the question of whether the $3,000 level (adjusted for rising price level) is the appropriate place to peg the poverty thresholds. Is this level really adequate, according to society's concept of a decent and acceptable level of living? We raise the question here, without attempting to answer it.

The following is a critical evaluation of the methods Orshansky used in developing her poverty scale. This scale is based on the premise that the proportion of income allocated to food is an indicator of level of economic well-being. This is a widely used premise. For example, the scale developed by the Bureau of Labor Statistics (BLS) for computing the City Worker's Family Budget (income required to maintain urban families differing in size and composition) is also based on the premise that families allocating equal proportions of income to food are at the same level of living. The invariate proportion is found in the Budget. The income required by various classes of families is that level of income at which families of the specified type are allocating the specified proportion of income to food, as indicated in the 1960–61 survey of consumer expenditures.

The nonfarm version of the Orshansky scale is developed by estimating the average cost of a comparable level of food consumption for families in 62 classes based on size and composition, and obtaining the required income by multiplying the food cost by 3, an invariate multiplier (*3*).[4]

The food costs are based on the USDA's food plans (*5*). These plans, at four consumption levels, specify the quantities to be selected from among specified foods for individuals of specified sex and age. Current prices of the plans are revised periodically. The costs for individuals can be summed, with appropriate adjustments related to family size, to provide costs for the family. The economy food plan, the least costly of the four plans, is the basis for the generally accepted scale.[5] The value of each food plan is multiplied by 3, the multiplier derived from the average relation of food expenditures to income in the U. S. population of families of two or more persons.

Because farm families produce a part of their own food, the values of the nonfarm food plans are reduced to obtain comparable values for farm families. The reduction is now set at 30 percent, in line with the findings of the 1960–61 survey of consumer expenditures (*4*). (When the scale was first published, the differential was 40 percent, the approximate proportion of the total value of food that was home produced, as reported in the 1955 Household Food Consumption Survey.) The value of the food plan, less 30 percent, is multiplied by 3 to obtain a required income level for farm families. The effect is to assume that farm families receive all their goods and services 30 percent cheaper than nonfarm families. Tabulated data of the 1960–61 survey indicate this is not a valid assumption. For some classes of consumption items, such as transportation, for example, farm families actually spend a greater amount than urban families with the same income.

One of the principal objectives of the study on which this paper reports is an examination into the nature of the proper farm-urban differential and the development of more realistic relationships.

Equivalent Levels of Living: A New Approach

The method presented here is different from those described above in several respects and while it may be better in some ways, it is still far from the ideal.

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[1] Miss Orshansky also developed a different scale to be applied to a somewhat higher general level of income, to represent the "near-poor."

[2] Italic numbers in parentheses indicate references listed at the end of this paper.

[3] See Hathaway (*1, p. 38*). Hathaway estimated that farm families require 86 percent as much income as nonfarm families to have a comparable welfare or purchasing power.

See also Watts (*7*). Watts computed a poverty scale for rural-urban differentials in the poverty thresholds. He used rural nonfarm data to represent "rural."

[4] An exception is the two-person family. A ratio of 27 percent rather than one-third was used in this case.

[5] A second scale was also developed, based on the low-cost food plan, which costs about a third more than the economy plan.

It is presented here to facilitate further discussion, critical evaluation, and future refinement. If, after considerably more work and testing are done, this method proves to be superior to all others, then it should be adopted as a new basis for calculating poverty thresholds, to be used for tabulating census data. We do not propose these or any other such poverty thresholds as eligibility criteria to be used in administering programs for the poor. Such uses are not warranted by the nature of poverty thresholds.

Assumptions and Concepts

The key assumption of this method is that two families are at the same level of living if they can afford the same level of food expenditure, adjusted to the cost of home-served food. We assume two alternative levels of diet adequacy, (1) the economy and (2) the low-cost food plans, the latter being a somewhat higher level of consumption. The amount of income a family needs to afford a given level of food consumption is assumed to be determined by the family's "normal income level," as defined later, the number and age of the children, age of the head-of-household, tenure (whether the family owns or rents its dwelling), the region, and urbanization.

This relationship is expressed symbolically as follows:

(1) $F_i = f(P_i, R, U, A, T, S, H)$
(2) $P_i = f(F_i, R, U, A, T, S, \mathrm{H})$[6]
(3) $M_i = f(P_i, R, U, A, T, S, H)$
(4) $C_i = f(P_i, R, U, A, T, S, H)$
(5) $D_i = f(P_i, R, U, A, T, S, H)$
(6) $K_i = f(P_i, R, U, A, T, S, H)$
(7) $Q_i = P_i + M_i + C_i + D_i + K_i$

The terms are defined as follows:

$F =$ food consumption. This includes expenditures for food purchased for use at home or to be carried from home, and for meals away from home, the value of food or meals received as pay, and the value of home-produced food. Because the value of food consumed is related to USDA's food plans (see above), which assume that all meals are eaten at home, adjustment to a food-at-home basis was made by dividing all expenditures for meals away from home (except school lunches) by 2. The rationale for this adjustment is that in the 1955 Household Food Consumption Survey, the average meal away from home cost twice as much as the average meal at home. Because of the subsidy in most school lunches, however, it was believed that the cost of school lunches was more like the cost of a meal at home than a purchased meal, and no adjustment was made to these expenditures. A further adjustment was made reducing the value of home-produced food by 60 percent because it has been shown that 40 percent of the value of home-produced food substitutes for expenditure for food and the remaining 60 percent increases the level of food consumption for farm families above that of nonfarm families at a comparable level of living *(6)*. That is, farm families tend to eat better than their overall level of living would allow in a comparable nonfarm situation. Therefore, the value of home-produced food is reduced by 60 percent in calculating the value of food consumption expenditure. This adjustment is necessary because of the basic premise that families at comparable levels of living have comparable food expenditures, adjusted to the cost of home-served food.

$P =$ Partial income equivalent. This item includes those categories of outlay that are relatively stable from year to year. It serves as a proxy for permanent or normal level of living. It includes all expenditures for food at home and away from home and the value of meals received as pay at the reported level; expenditures for shelter (rent for renters; real estate taxes, insurance, and mortgage interest for owners; repairs paid for by the family for both renters and owners); fuel, light, refrigeration, and water; household operations; house furnishings and equipment; clothing, clothing materials, and clothing services; personal care; recreation; reading; education; automobile operation (but not purchase); other travel and transportation; miscellaneous family expenditures; gifts and contributions; and personal insurance.

Excluded from P are three major consumption categories: car purchase, medical care, and personal taxes. Car purchase is excluded because of its extreme fluctuation. During a year when a car is purchased the entire purchase price is counted as the value of car purchase, even though it is paid for in monthly installments over 2 or more years. Other durable goods such as furniture could have been excluded on the same rationale, but they were left in because of their relatively small magnitude as compared with car purchase.

In determining the value of P for each of the specified family type-family size classes, the value of F is set at the estimated cost of the selected food plan for the class. The cost was estimated on the basis of the known number of family members, average age of head and age-class of the oldest child. The reported average age of the head was used in determining the value of his food plan. The wife was assumed to be in the same age class. A hypothetical distribution of children in each family type was developed. The average value for each class in the North Central and South farm data was compared to the average of values computed on the reported composition of the individual families and accepted for use on this basis in the other region-urbanizations.

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[6] As explained in the text, equation (2) is obtained by an algebraic manipulation of equation (1), with F set at a prescribed level.

M = Medical care. It includes payments for health insurance made by the family and excludes the value of care received through insurance or otherwise without direct expenditure.

I = Income. It is money income received in the survey year, after deduction of personal taxes and occupational expenses.

C = Automobile purchase, net of trade-in allowances and discounts but including financing charges.

D = Savings. More precisely, this quantity is the net change in assets and liabilities. It is calculated as the algebraic sum of increases and decreases in assets and liabilities. Net increases in assets and decreases in liabilities represent a net saving during the year; net decreases in assets and increases in liabilities represent a negative saving, or net dissaving.

K = Personal taxes, including Federal, State, and local income taxes, poll taxes, and personal property taxes.

R = Region, as defined by the Bureau of the Census: Northeast, North Central, South, and West.

U = Urbanization, determined by location of the principal family dwelling as urban, rural nonfarm, and rural farm, as defined in the 1960 Census of Population. Families living on urban farms are in the urban population. (A separate analysis was done for each region within urbanization, as discussed later.)

A = Age of household head, in years.

T = Family type as determined on the basis of relationship of family members and age of the children of the family head. In this report, estimates are provided for 4 classes: Families of husband and wife only (Type 1); and 3 classes of husband and wife families with own children and no other persons present: with oldest child under 6 years (Type 2); oldest child 6 through 17 years (Type 3); oldest child 18 years and over (Type 4). (Binary dummy variables were used to represent family type in the regressions.)

S = Family size, determined on the basis of the aggregated weeks of family membership of all family members. Fifty-two weeks of family membership equals one year-equivalent person.

H = Tenure of the principal family dwelling in three classes: (1) owners all year, (2) renters all year, and (3) those who changed tenure during the year. (Dummy variables were also used to represent tenure.)

Q = Required income. This quantity is interpreted as the income that a family would need to afford the given level of food consumption (the economy or low-cost food plan) for that family size and type, given the usual consumption and saving patterns of such families in the specified region and urbanization. Q is calculated as the sum of consumption categories ($F + M + C + K$) plus savings (D). This is based on the identity, income equals consumption plus savings.

Method Used

Multiple regression equations were computed using ordinary least squares to estimate the equations (1) and (3) to (6). The individual household interview record data from the 1960–61 Consumer Expenditure Survey were used—over 13,000 observations in all. Each observation was weighted by the population count it represented. A number of different algebraic forms were tried. The quadratic form with binary (zero-one) dummy variables for family type and home ownership seemed to be as good as any, and it was selected because of its computational simplicity. This is essentially a covariance regression form. As additional resources are made available, some of the other equation forms, notably the log-log and semi-log forms, will be tested in the model to see how the choice of equation form influences the ultimate outcome.

The estimate of equation (1) computed for the North Central farm data is as follows:

$$
\begin{array}{rlrlrlrl}
F = 0.131 & + & .194P & - & .0112P^2 & + & .056S \\
(0.8) & & (4.9) & & (6.4) & & (3.4) \\
- .0039T_1 & - & .054T_2 & + & .024T_3 & - & .029T_4 \\
(0.1) & & (0.9) & & (0.5) & & (0.6) \\
- .018T_5 & - & .014T_6 & + & .006H_1 & - & .085H_2 \\
(0.2) & & (0.2) & & (0.1) & & (1.0) \\
+ .00092A & + & .0119PS & - & .00018PA & & \\
(0.5) & & (3.5) & & (0.3) & & \\
\end{array}
$$

$$R^2 = 0.6571$$

In parentheses below each coefficient is the absolute value of the "Student's t" test statistic for testing the null hypothesis that the coefficient is zero. Regressions of similar form were computed for each of the equations (3) to (6) for each of the 12 region-urbanizations. In each case the regression was highly significant, as indicated by the analysis-of-variance of regression, despite the fact that the R^2 was as low as 2 percent in some cases. Degrees of freedom were essentially infinite.

A separate set of regression equations was computed for each of the three urbanizations within each of the four regions, making 12 separate sets of equations. Statistical tests were run to see if the sets of data could be pooled to form separate equations for farm, combining all regions and using dummy variables to represent the regions. The results indicated that the set of farm observations from each region was significantly different from that of the other regions. Similar tests were run to see if all rural observations could be combined—farm plus rural nonfarm. Again, the results were such that pooling seemed inadvisable. The same answer occurred when pooling at the national level was attempted. In short, the tests showed that each region-urbanization should be handled separately, because significantly different regression equations are obtained in each case.

Within each region-urbanization, a set of income levels required to afford the economy food plans was computed for each of 16 size-types, first for owners, than for renters. Then the entire procedure was repeated for the low-cost food plans. An iterative procedure was followed. First, the food value, F, was specified based on family size, type, region, and urbanization. Then, equation (1) was algebraically transformed to obtain equation (2), with P as a function of F, and the value of F was substituted to obtain a predicted value of P. This is interpreted as the partial income equivalent needed to afford the food budget specified in F.

Rather than transforming equation (1) to get equation (2), we would have preferred fitting an equation directly with F as independent variable and P as dependent, since we are estimating the value of P for a given value of F. But this did not prove to be practical because of the nature of the data. The reason may be seen when the data are plotted. When P is plotted on F, the data describe a curve that extends upward to the right, with an increasing slope. As evidence of this, we found that a third degree polynomial in F had significantly positive coefficients for the F, F^2, and F^3 terms. With such a sharply sloping relationship, the predicted value of P for a given value of F is quite unreliable, as we learned ex poste.

After solving equation (2) for P, this value was plugged into equation (3), to estimate how much medical care expenditure, M, would be consistent with that level of P, given the specified family size, type, and other variables.

The same value of P was then substituted into equations (4), (5), and (6), to determine the values of C, D, and K consistent with the other variables.

Finally, the required income, Q, was calculated as the sum $P + M + C + D + K$. This is the income needed to afford the food plan (at the economy or the low-cost level) for a specific size and type of family. Then Q was calculated for the 15 other types and sizes of family and all 16 required income levels were weighted to determine a combined average value of required income. This procedure was done separately for owners and renters in each of the 12 region-urbanizations. Then weighted average estimates for the region-urbanizations were derived by weighting together the values for the selected family type-family size cells in the proportion in which they occur in the U.S. population (urban and rural). This procedure permits comparison of needs without regard for differences associated with the population mix.

Given the recursive nature of this model, it would have been desirable to use two-stage least squares rather than ordinary least squares in estimating the coefficients. However, this would have added greatly to the time involved in completing this assignment. As additional resources become available, this and other refinements may be introduced.

In practice, we found that the model produced negative savings, or dissavings, in a few family size-types. We set these negative values at zero in computing Q. The rationale for doing this is that it seems unrealistic and inequitable to expect certain classes of low income families to dissave year after year as the basis for maintaining a standard level of living.

Results of the Analysis

The following tentative conclusions may be drawn from the analysis:

1. Farm families in general, particularly renters, may require more than 70 percent—perhaps 80 to 85 percent—as much income as comparable urban families.

2. The farm-urban ratio varies from one region to another. For example, the study reported here showed that the ratio should be 84 percent in the Southern region; and 81 percent in the North Central region.

3. Owners and renters may require a different ratio. In the South, the ratios for farm owners and renters turned out to be essentially equal; 84 and 83 percent, respectively. But in the North Central region, owners required only 73 percent, while renters required 97 percent as much income as comparable urban families to attain the same level of living, as defined earlier.

4. The ratio may vary from one family size and type to another. If so, a constant ratio as used in other poverty scales is not appropriate.

Some of the detailed findings supporting these tentative conclusions are presented below. Only the South and North Central regions are shown. A similar analysis was done for the West and Northeast, and roughly the same relationships were revealed. But a number of very unrealistic answers appeared, so the result from these two regions are withheld pending further examination.

These estimates are further limited to families of two or more persons, consisting of husband and wife only or husband and wife and their never-married children. The exclusion of other families of two or more persons is necessary because the published data on the survey do not provide enough information on the sex-age composition of these family types to calculate the values of F needed for evaluating equation (2). Estimates were also derived for single individuals, but these were found to be unreasonable. Probably the differences in the consumption patterns of single consumers and families preclude the derivation of valid estimates for single consumers using pooled data. The calculations have been limited to families of seven or fewer persons. Also excluded from the present analysis are data for families that changed tenure during the survey year.

The estimates given here relate to 64 percent of the U. S. count of families and single consumers. The remaining 36 percent includes families of the selected types who were excluded because of size or because they changed tenure during the year (6 percent); one-parent families (5 percent); husband-wife families with persons other than own children present (6 percent); single consumers (15 percent); and all other family types (4 percent).

The income needed (*Q*) to afford the economy food plan is shown in table 1, for a selected family size-type. *Q* values are shown for the three urbanizations (farm, urban, and rural nonfarm) for the North Central and Southern regions. Among homeowners, an urban family of four whose oldest child is age 6 to 17 years, would need $4,760 in the North Central region, $3,214 in the South, to afford a level of living consistent with the economy food plan, the food plan underlying Orshansky's poverty scale. A farm family of comparable size and type in the same region would require 70 percent as much income as an urban family in the North Central region, 90 percent as much as an urban family in the South—$3,325 and $2,899, respectively.

Table 2 shows the same kind of data, though in greater detail. These data are shown here not as a proposed "final answer," but rather, as a basis for showing the degree of detail that is possible using this approach, and to indicate the variation in results from one family size and type to another.

The use of an invariate multiplier in conjunction with the cost of the food plans in the Department of Health, Education, and Welfare scale and the use of an invariate ratio of food to income in the BLS scale is justifiable only if nonfood costs vary in direct proportion to food costs over the range of family type and size. The estimates of required in-

TABLE 1.—*Required incomes for the economy food plan level, family size 4, family type 3 (oldest child 6 to 17 years)*

Tenure of dwelling and region	Urban	Rural nonfarm	Rural farm	Ratio of farm to urban
	Dollars	*Dollars*	*Dollars*	*Percent*
Owners:				
North Central	4,760	4,941	3,325	70
South	3,214	3,575	2,899	90
Renters:				
North Central	4,404	4,075	3,724	85
South	3,382	3,527	3,093	91

TABLE 2.—*Required incomes for North Central and South, owners and renters combined, economy food plan level*

Family type [1] and size	North Central		South		Ratio, farm to urban	
	Farm	Urban	Farm	Urban	North Central	South
	Dol.	*Dol.*	*Dol.*	*Dol.*	*Pct.*	*Pct.*
Type 1, 2 persons	1,244	1,315	712	764	95	93
Type 2:						
3 persons	3,305	3,895	1,763	2,566	85	69
4 persons	3,603	4,232	2,196	3,109	85	71
5 persons	3,754	4,192	2,483	3,443	90	72
6 persons	3,874	4,158	2,732	3,554	93	77
Type 3:						
3 persons	2,623	3,864	2,045	2,200	68	93
4 persons	3,437	4,660	2,953	3,261	74	91
5 persons	3,889	5,040	3,284	3,795	77	87
6 persons	4,215	5,090	3,564	4,085	83	87
7 persons	4,849	5,650	3,956	4,670	86	85
Type 4:						
3 persons	2,501	3,365	1,677	1,688	74	99
4 persons	4,243	5,260	3,111	3,696	81	84
5 persons	5,167	6,334	3,870	4,750	82	81
6 persons	5,228	6,138	4,006	4,782	85	84
7 persons	6,358	7,278	4,782	5,833	87	82
Total, size 2+	2,805	3,469	2,040	2,389	81	85

[1] As defined earlier, type 1 is husband and wife only; type 2 includes children, the oldest being under 6 years; type 3, oldest child 6 to 17 years; type 4, oldest child 18 years or older.

come developed in this study, although too irregular to indicate the proper relationship of food and nonfood costs, have enough pattern to suggest that the relationship is not invariate. Table 3 indicates that nonfood costs rise relatively less than food costs as family size increases. The differences between these rates of increase are greater for families with young children only, than in families with older children.

Conclusion: Further Refinements Needed

Several additional refinements in this method are needed. These have become apparent as the study has evolved. A brief discussion of these ideas is sketched here as the starting place for further critiques and suggestions.

The equations with savings, car purchase, and taxes as dependent variables should be improved. The R^2 is rather low, though statistically significant. Perhaps some reasonable and defensible way can be found to introduce $I - P$, as a proxy for the temporary component of income. This variable would give a very good fit to the savings and car-purchase data. The reason is as follows: The temporary income component fluctuates from year to year as a result of windfall losses and gains. The permanent component is quite stable. Windfall gains are likely to be spent on an automobile (C) or put into savings (D), and some of it is taxed away (K). Savings will be less when an automobile is purchased, so that C and D are inversely correlated. Losses, or negative temporary income, are reflected in reduced savings, postponement of the automobile purchase (or perhaps purchase of a cheaper model), and reduced taxes. Thus, the magnitude of C, D, and K are strongly affected by temporary income, which may be represented by $I - P$. On the other hand, food consumption is related more closely to permanent income than to reported income. The bulk of a windfall gain is spent not on food (if the family is above the subsistence level) but on durable goods, savings, and taxes. And when a loss occurs, the family tends to cut back on items other than food. For this reason, equation (1) shows food consumption as a function of P, the proxy for permanent income, rather than reported income. The same rationale seems to apply to the routine medical care expenses, not including emergencies. However, despite the fact that $I - P$ would give a better fit to the D, C, and perhaps the K equations, there are serious conceptual problems in using such equations in the model presented here. Further discussion and study are needed.

The form of the P equation shown earlier for the North Central farm households is the same form as the equations used in calculating the other components of required income (M, C, D, and K). Other equation forms were computed, but their implied required incomes have not been calculated. A somewhat different type of regression model should also be tried, one that has interaction terms between each of the family type dummy variables and the continuous or numeric variables (P, S, and A). In this way, a different "response" to the continuous variables could be allowed for each family

TABLE 3.—*Relative change in cost of economy food plan with change in family size, and estimate of nonfood needs by family type*

[4-person family in each type and in each region—urbanization = 100]

Family type and size class	Farm				Urban			
	North Central		South		North Central		South	
	Cost of food plan	Nonfood needs	Cost of food plan	Nonfood needs	Cost of food plan	Nonfood needs	Cost of food plan	Nonfood needs
Husband and wife, oldest child under 6 years:								
4 persons	100	100	100	100	100	100	100	100
5 persons	114	102	115	112	114	95	115	109
6 persons	126	103	127	123	126	91	127	110
Husband and wife, oldest child 6 to 17 years:								
4 persons	100	100	100	100	100	100	100	100
5 persons	115	112	116	109	115	106	116	117
6 persons	129	120	131	117	130	103	131	123
7 persons	150	138	152	127	150	113	152	140
Husband and wife, oldest child 18 years and over:								
4 persons	100	100	100	100	100	100	100	100
5 persons	121	127	122	125	121	120	122	131
6 persons	132	[illegible]	133	127	132	112	133	128
7 persons	159	[illegible]	161	151	159	133	161	157

type. A similar set of interaction terms should be tried for the tenure dummy variables, H_1 and H_2. Also, C should be used as an independent variable in the D equations, and D in the C equations.

Issues more basic than analytical procedure should also be faced. For example, variations in quality of housing between rural and urban groups should not be ignored. The 1960 Census of Housing contains data that show rural housing to be far inferior, even for comparable income classes. Quality of other goods and services also varies between rural and urban sectors, as well as among regions. Two families cannot be said to have the same level of living if one has goods and services that are of inferior quality. The fact that variation exists is easily demonstrated. How to handle this variation is a much more difficult task. These and other conceptual problems must be dealt with if a sound and reliable poverty scale is to be developed.

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Chapter 30

Poverty Projections in Relation to Aggregate Demand, Economic Growth, and Unemployment

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At a time when the antipoverty programs are facing severe budgetary limitations and the unemployment level has begun edging back up, it is timely to look at the question of poverty projections. In particular, it is essential to develop some idea of what effect the rates of economic growth and unemployment are likely to have on the overall number of poor, and the number of poor in various subgroups. Are economic growth and full employment likely to eliminate poverty, or must we look to massive antipoverty programs?

Lampman (*6*)[1] developed an elaborate set of poverty projections to 1970 and 1975. In effect, his projections showed that unless special programs were begun on a grand scale, the poverty situation would become stagnant, with little or no improvement in sight for years to come. His analysis did not consider the effects of alternative national economic policies related to the growth rate, aggregate demand, and employment. Other researchers have examined different aspects of this complex relationship. The purpose of this paper is to discuss their methods and findings, insofar as they are applicable here, and to present the results of a somewhat different approach to the question of poverty projections.

Recent Studies of Poverty Relationships

One of the best and most widely quoted pieces on the subject of poverty relationships is the "Trickling Down" paper by Anderson (*2*). Using time series data for a number of population subgroups, Anderson estimated the elasticity of income with respect to economic growth for each of several population subgroups. He fitted a series of regressions relating the annual percentage change in each group's median income to the annual percentage change in deflated U.S. per capita personal income. Families with female head and families with head over 65, were found to be in the "backwash" of the economy, in the sense that the median incomes for these groups are insensitive to movements in U.S. per capita personal income. Farm families who remain on farms also appeared to be "fighting an uphill battle." But for nonwhites (outside the South), the elasticity is very high and highly significant. Whites and families with male head have elasticities of 1.0 or greater, indicating their ability to realize benefits at least proportionate to rising national median income.

Anderson also plotted group data showing each group's incidence of poverty (as defined below) against group median income. The resulting graph demonstrated that while a group has generally low incomes and high incidence of poverty, reductions in poverty resulting from rising median income occur rapidly. But as the group becomes more affluent, eventually only the hard core poor are left; and these are largely unresponsive to increases in the income of the group as a whole.

Anderson's model is essentially the following:

(1) $M_{it} = f(\underline{M}_t)$

(2) $P_{it} = f(M_{it})$

Where M_{it} = median income for group i in year t;
$\underline{M}_t$ = national median income in year t;
(Underlined terms are used throughout this paper to represent national aggregate data.)
P_{it} = percentage of group i in poverty during year t.

Throughout this paper, I have used "poverty" data based on the admittedly crude poverty criterion, $3,000 family income, as Anderson did in the article discussed here. This choice was forced by the lack of a sufficiently long time series based on a better set of poverty thresholds. However, an analysis by Aaron (*1*) suggests that the relationships examined here may not be substantially affected by this choice. Using aggregate poverty data based on $3,000, Aaron got essentially the same coefficients as those obtained by using the Orshansky poverty thresholds that vary by family size and by farm-nonfarm residence (*10*).

Although Anderson's article is useful, it throws little light on the effects of alternative growth rates and unemployment rates. Gallaway (*4*) made an attempt in that direction using as his model:

(3) $\underline{P}_t = f(\underline{M}_t, \underline{U}_t)$

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[1] Italic numbers in parentheses indicate references listed at end of this paper.

Where U_t is the national unemployment rate during year t.

Using time series data for the years 1947–63, Gallaway fitted a regression and used the resulting equation to project poverty rates to 1980. His main conclusion was that the Council of Economic Advisors had overpredicted the number of poor, thus overstating the seriousness of the need for antipoverty programs. The Council estimated that 10 percent of American families would still be in poverty by 1980, based on a 4-percent unemployment rate and a relatively high 2.93-percent annual rate of increase in median family income. As an alternative, the Council assumed a 6-percent unemployment rate and a 2.18-percent growth rate. The resulting incidence of poverty was much greater: 13 percent. In contrast Gallaway estimated only 6.4 percent and 8.7 percent, respectively, using the Council's own assumptions. Gallaway's conclusion was that massive antipoverty programs were first of all unnecessary, since economic growth would largely solve the problem. And secondly, such programs would, in Gallaway's view, be ineffective anyway because the 6-percent level of poverty incidence may be approaching the "irreducible minimum below which the value of P (percent incidence of poverty) cannot be pushed short of direct-subsidy programs."

At face value, Gallaway's argument appeared convincing. However, Aaron *(1)* conducted an analysis which raised several questions as to the validity of Gallaway's procedures and results. First, Aaron demonstrated that aggregate poverty statistics, representing the nation as a whole, were too crude a tool for testing the backwash thesis—the idea that poverty will remain despite economic growth. For example, Aaron showed that white family poverty is more sensitive to economic growth but less sensitive to the unemployment rate than is nonwhite family poverty. Furthermore, he showed that Gallaway's results are sensitive to the form of equation used in the regressions; the semilogarithmic form, according to Aaron, tends to overstate the impact of rising incomes on the incidence of poverty.

The model Aaron used is essentially this:

(4) $P_{it} = f(M_t, U_t)$

It differs from Gallaway's model [equation (3)] in that national median income and unemployment are regressed on the incidence (percent) of poverty in the ith group, rather than the nation as a whole. The analysis was done for seven groups, varying by location of residence (farm or nonfarm), race (white or nonwhite), and sex of family head.

Aaron concluded that Gallaway's rather optimistic view of the curative role of economic growth by itself was unwarranted. For example, among the nonfarm white female-headed families, more than 34 percent would still be poor in 1970, and nearly 25 percent in 1980, despite high economic growth. These families accounted for more than a third of all poor households in 1964.

Analysis of Employment Relationships

Some of Aaron's equations showed the national unemployment rate to be a significant variable in explaining the incidence of poverty. This raises the question, What effect does rising employment have on the employment in each subgroup?

Muth *(9)* examined the relation between the unemployment in various subgroups of the labor force (by age, sex, and color) and the national unemployment rate. His model was as follows:

(5) $U_{it} = f(U_t, T_t)$

Where T_t is the time trend.

He used first differences in estimating his equations, because the Durban-Watson statistic suggested positively correlated errors when the original data were used. The constant term in his equation, interpreted as the time trend, turned out to be nonsignificant. His findings were consistent with those presented earlier in the classic study by Simler *(11)*, namely, that the structural hypothesis may be laid to rest. More explicitly, Muth found that with the exception of teenagers, measures that reduce the overall unemployment rate (U) will do the same for all groups or workers.

Mooney and Watts *(8)* studied the relation between the national unemployment rate (U) and employment among the poor. Their model was this:

(6) $E(\text{poor})_t = f(U_t)$

Where E(poor) is the employment among the poor, in absolute numbers. A decline in U from 5.4 to 4.5 to 3.5 was taken as representing a hypothetical rise in aggregate demand. Given the date when their study was done (early 1965), this representation seems reasonable. But recent experience has shown that aggregate demand can climb at a rapid rate even while the national unemployment rate is rising. During September 1967, the unemployment rate reached its highest level in 2 years, 4.1 percent, while gross national product (GNP) continued to increase steadily. How could this happen? A plausible explanation is offered by Arthur M. Ross, Commission of Labor Statistics (see New York Times, Oct. 12, 1967). He attributes all of the increase to an unusual rise in unemployment among adult women. The number of women entering the labor force rose by nearly a million—about double the usual number. Many of these women found jobs, but not enough to overcome the substantial rise in the labor force. Consequently, the national unemployment rate increased sharply, from 3.8 to 4.1 percent in 1 month—supposedly indicating an economic slowdown.

Meanwhile, other statistical series gave the opposite indication. The unemployment rate for adult men remained near the record low, at 2.3 percent, and the rate for nonwhite men reached its record low of 3.5 percent. Retail sales also continued to advance. It is quite clear from the above that the unemployment rate alone is a rather weak, sometimes misleading, indicator of aggregate demand and economic growth conditions.

The analysis by Mooney and Watts (*8*) serves a useful purpose, in showing the relation between national rates of unemployment and employment among the poor. However, because their model excludes any specific growth-rate variables, such as the rate of change in median income or deflated disposable personal income per capita, their findings—that a shift from 5.4 to 3.5 percent unemployment rate would lift 1.8 million out of poverty—must be taken as inconclusive.

Mooney later, in a much more incisive study (*7*), examined the effects of overall Standard Metropolitan Statistical Area (SMSA) unemployment rate on the labor force participation rate of various subgroups of the urban poor labor force.

He used 1960 decennial census data on 1,400 poverty tracts in the 52 largest SMSA's (those over 500,000 population) to calculate regression equations. His basic model was this:

(7) $L_{ijk}=f(U_j)$

Where L_{ijk} = labor force participation rate. In the subscript, the index *i* represents the poverty tract within the *j*th metropolitan area (SMSA) for sex *k* (male or female).

U_j = unemployment rate in the *j*th SMSA

The 1,400 urban poverty tracts were separated into three types: Predominantly nonwhite, predominantly white, and racially mixed. Within each of these types, the male and female data were analyzed separately, by using equation (*7*). Then, for the females, an additional independent variable was included to represent the demand for female labor.

Mooney's results supported what he called the "discouraged worker thesis"—the idea that as unemployment rises and jobs are harder to find, many people give up and drop out of the labor force. For example, an elasticity of —4.52 was found for nonwhite married females. This implies that an increase of 1 percent in the unemployment rate in the local SMSA leads to a *decline* of 4½ points in the labor force participation rate of nonwhite married women. During periods of high unemployment, there may be some nonwhite females who enter the labor force, as their husbands are thrown out of work. But at the same time, on balance a greater number of discouraged females withdraw from the labor force when jobs become harder to find. These findings lead Mooney to conclude (with several qualifying caveats) that during prosperous times, the average nonwhite family with both husband and wife present will attempt to lift itself out of poverty by becoming a multiple-earner family. Thus the so-called backwash thesis—the idea that some subgroups are not helped by improving economic conditions—seems not to apply to nonwhites. As the unemployment rate rises, many nonwhite females drop out of the labor force, and the typical nonwhite family's poverty is compounded by frequent unemployment of the household head and fewer breadwinners. On the other hand, Mooney contends that the backwash thesis has some relevance to poor urban white families with both parents present: proportionately fewer of these people are drawn into the labor force by a tighter labor market.

Thurow has recently completed a truly elegant study in which he analyzed factors affecting employment gains of certain disadvantaged groups (*12*). His model was this:

(8) $E^{D}_{it}=f(E^{A}_{jt}, E^{A}_{jt-1}, U^{A}_{jt}, U^{A}_{at-1}, C_t, T_t, W_t)$

Where E^{D}_{it} = employment among the *i*th disadvantaged group (e.g., nonwhite adult males) in year *t*.

E^{A}_{jt} = employment among the *j*th advantaged or preferred group (e.g., white adult males) in year *t*.[2]

U^{A}_{jt} = unemployment rate among the advantaged group in year *t*.

C_t = racial composition of the labor force —percent nonwhites—in year *t*.

T_t = time trend.

W_t = minimum wage/average hourly earnings in year *t*.

He used seasonally adjusted quarterly data from 1954 to the second quarter of 1966 in computing his regressions. A multiple linear regression model was used. To achieve relatively homogeneous groups, he handled whites and nonwhites separately, and broke the labor force in each race group into three subgroups by sex and age: adult males, adult females, and teenagers. In using his equations for making projections, he represented a rise in aggregate demand by a 1-percent drop in U^{A}, the unemployment rate for white adult males and females. This procedure is predicated on the assumption that white employment gains are a reasonable proxy for the forces embodied in a rising aggregate demand.

Thurow's results indicate that an expansion of aggregate demand strong enough to raise employment among the advantaged groups (adult whites) by 1 percent would "increase employment among adult nonwhite males by 3.3 percent, among adult nonwhite females by 1.7 percent, among nonwhite teenagers by 3.9 percent, and among white teenagers by 2.6 percent" (*12, p. 13*).[3] (These projections ignore the induced increases in the labor force participation rate.) Concurrently, unemployment rates for these groups would decline by much more than 1 percent: 3.1 percent, 1.6 percent, 2.9 percent, and 1.3 percent, respectively. Thus the disadvantaged groups would gain proportionately more than the advantaged, as reflected by these key employment statistics.

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[2] Nonwhite adult male employment is regressed on white adult male employment; nonwhite adult female employment on white adult female employment; nonwhite teenage employment on white teenage employment; and general teenage employment on adult variables (both male and female) (*12, p. 7*).

But what about the overall effects on the number of poor in these groups? Orshansky (*10*) has demonstrated that even though there is a smaller incidence of poverty among those with jobs, literally millions of families are poor even though the head is employed at a full-time job.[4] Thus, for many people, getting a job is not tantamount to escaping from poverty, particularly in the low-wage occupations. For this reason, projections of employment and unemployment rates such as those presented by Muth (*9*), Mooney (*7*), Mooney and Watts (*8*), and Thurow (*12*) are only a part, though an essential part, of the picture. Likewise, projections of poverty rates are incomplete if they ignore variations among subgroups in regard to unemployment, as was done by Anderson (*2*), Gallaway (*4*), and Aaron (*1*). The model presented below is an attempt to bridge the gap between these two kinds of analyses.

A Recursive System for Poverty Projections

The model for a recursive system for poverty projections picks up where Anderson (*2*) left off. His graphic analysis demonstrated that a subgroup's poverty rate was related to its median income, and he statistically tested the hypothesis that changes in subgroup median income were related to aggregate demand, as represented by changes in the national median income. See equations (1) and (2). In the model presented below, the subgroup's poverty rate is related to the median income and unemployment rate of the subgroup, rather than the nation as Aaron (*1*) did.

The model may be represented in general form as follows:

$$(9)\quad U_{it} = f(\underline{U}_t)$$

$$(10)\quad M_{it} = f(\underline{M}_t, U_{it})$$

$$(11)\quad P_{it} = f(M_{it}, U_{it})$$

In equation (11), the incidence of poverty (P_{it}) in subgroup *i* during year *t* is hypothesized to be dependent upon the subgroup's median income and unemployment rate. In this system of equations, the national unemployment rate ($\underline{U}$) and the national median income ($\underline{M}$) are exogenous variables.

A number of equation forms were tried. The equations presented below seemed to be adequate for demonstrating the use of the model, though other forms gave equally good fits of the data.[5]

Annual time series data for the period 1948–65 were used in fitting the regression equations (table 1).

The equations estimated for white families are as follows:

$$\begin{aligned}(9\text{-}1.3)\ \log U_{Wt} &= 0.02134 + \underset{(1.0)}{0.01774}\, \underline{U}_t \\ &\quad + \underset{(4.1)}{0.77586} \log \underline{U}_t\end{aligned}$$

$$R^2 = .9914$$

$$\begin{aligned}(10\text{-}1.3)\ \log M_{Wt} &= 0.01533 + \underset{(159.4)}{1.00802} \log \underline{M}_t \\ &\quad - \underset{(1.0)}{0.00402} \log U_{Wt}\end{aligned}$$

$$R^2 = .9995$$

$$\begin{aligned}(11\text{-}1.4)\ \log P_{Wt} &= 2.28924 - 1.36555 \log M_{Wt} \\ &\quad + \underset{(2.7)}{0.05095} \log U_{Wt}\end{aligned}$$

$$R^2 = .9939$$

In parentheses below each coefficient is the value of the "Student's t" statistic for testing the hypothesis that the coefficient is different from zero. In each equation, the subscript *i* is replaced by *W* to represent the white subgroup.

When equation (9-1.3) is translated out of logs, it has the form: $Y = a10^{b_1 X} X^{b_2}$

Equations (10-1.3) and (11-1.4) have the more familiar Cobb-Douglas form:

$$Y = a\, X_1^{\,b_1} X_2^{\,b_2}$$

A similar set of equations employ data for nonwhite families:

$$\begin{aligned}(9\text{-}2.3\ \log U_{Nt} &= -0.02776 - \underset{(1.4)}{0.08394}\, \underline{U}_t \\ &\quad + \underset{(3.2)}{2.02038} \log \underline{U}_t\end{aligned}$$

$$R_2 = .9355$$

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[3] Thurow obtained these results by evaluating the elasticities at the means, using his multiple linear regression equations. This leads one to wonder whether different elasticities would obtain at higher or lower levels of unemployment. By using a more flexible equation form, such as a nonlinear model with interaction terms, or perhaps by fitting the data for high- and low-unemployment years separately, one could test the hypothesis that the employment gains of a given subgroup depend on the current level of employment—whether we are operating in a relatively slack or tight labor situation.

[4] Applying her own poverty thresholds to data from the March 1965 Current Population Survey, Orshansky showed that more than 2 million families whose heads worked 50 to 52 weeks during 1964 were nonetheless in poverty.

[5] According to Foote (*3, p. 63*) a recursive system such as this will provide statistically consistent estimates of the structural coefficients, if two stage least squares is used in estimating the equations. I have used ordinary least squares, but if the residuals of the equations are uncorrelated, this method will give essentially the same results. Further analysis will be required.

TABLE 1.—*Data used for regression equations*

Year	National aggregate data [1]			Subgroup data [1]					
				Whites			Nonwhites		
	U	M	P	U	M	P	U	M	P
	Percent	*Thousands*	*Percent*	*Percent*	*Thousands*	*Percent*	*Percent*	*Thousands*	*Percent*
1948	3.8	$4.119	26.5	3.6	$4.293	26.5	5.9	$2.290	66.7
1949	5.9	4.089	30.0	5.6	4.215	30.0	8.9	2.152	67.0
1950	5.3	4.293	27.6	4.9	4.450	27.6	9.0	2.428	60.7
1951	3.3	4.430	25.1	3.1	4.620	25.1	5.3	2.432	60.3
1952	3.1	4.557	23.5	2.8	4.967	23.5	5.4	2.735	55.8
1953	2.9	4.928	22.5	2.7	5.126	22.5	4.5	2.877	52.4
1954	5.6	4.829	23.9	5.0	5.021	23.9	9.8	2.760	53.1
1955	4.4	5.143	21.3	3.9	5.375	21.3	8.7	2.936	50.8
1956	4.2	5.478	19.0	3.7	5.722	19.0	8.3	3.066	49.9
1957	4.3	5.466	19.1	3.9	5.698	19.1	8.0	3.051	49.4
1958	6.8	5.457	19.2	6.1	5.690	19.2	12.6	2.933	52.0
1959	5.5	5.773	18.1	4.9	6.028	18.1	10.7	3.089	48.1
1960	5.6	5.904	17.9	5.0	6.150	17.9	10.2	3.290	44.4
1961	6.7	5.967	17.7	6.0	6.200	17.7	12.5	3.321	45.7
1962	5.6	6.155	16.6	4.9	6.421	16.6	11.0	3.422	43.3
1963	5.7	6.358	15.5	5.1	6.659	15.5	10.9	3.525	42.3
1964	5.2	6.569	15.3	4.6	6.856	15.3	9.8	3.838	37.4
1965	4.6	6.765	14.8	4.1	7.052	14.8	8.3	3.967	36.7

Source: Unemployment data are from the 1966 Manpower Report of the President, p. 166. Rates are for persons aged 14 and over. Income data, from U.S. Bureau of the Census, are in constant 1964 dollars.

[1] As explained in the text.

$$(10\text{-}2.3)\quad \log M_{2t} = -0.25649 + \underset{(20.8)}{1.09914} \log M_t - \underset{(2.5)}{0.06997} \log U_{2t}$$

$$R^2 = .9734$$

$$(11\text{-}2.4)\quad \log P_{2t} = 2.18209 - \underset{(33.6)}{1.00880} \log M_{2t} - \underset{(0.3)}{0.00541} \log U_{2t}$$

$$R^2 = .9896$$

Muth (9) raised the question of serial correlation in the relationship between subgroup and national unemployment rates. To get around this problem, he used first differences in estimating his equations. A somewhat preferable approach is to include a time variable (*T*) in the equations along with the basic data. This was done, and the above equations were rerun. In each case, the coefficient of the time trend variable was not significantly different from zero. Therefore, the equations shown above, which exclude the time trend variable, were used in making projections.

Comparing the size of the corresponding coefficients for whites versus nonwhites in equations (9) and (10), we see that nonwhites have a relatively greater stake in a favorable economic environment than do whites. For example, a comparison of equations (10-1.3) and (10-2.3) shows that nonwhites have a slightly higher elasticity of subgroup median income with respect to national median income than do whites. This is consistent with Thurow's findings discussed earlier, that nonwhites gain proportionately more than do whites, from a rise in aggregate income. These equations also show that nonwhites have a higher elasticity for subgroup unemployment, which tends to support the same hypothesis.

In examining the third equation of each set [equations (11-1.4) and (11-2.4)] we see that the elasticity of poverty rate with respect to unemployment has the expected sign and is highly significant for whites, but it is not significantly different from zero for the nonwhites. Apparently nonwhite median income alone gives an adequate fit. Other equations fitted to these data verify this idea. The effect of higher nonwhite unemployment is felt through equation (10-2.3), by suppressing nonwhite median income, which in turn raises the incidence of nonwhite poverty in equation (11-2.4).

As a subsidiary part of this analysis, one of Aaron's (1) contentions was also re-examined, namely, that national aggregate poverty data, as used by Galloway, are inappropriate for projecting poverty. The same regression models as those in equations (9) to (11) were used for white and nonwhite data combined. Then an F test was done on the residual sums of squares of the pooled versus the separate equations. The resulting F values were highly significant; white and nonwhite data should not be pooled for estimating the equations presented here. Even a finer disaggregation would be desirable—splitting the data for each racial group still further, by age, sex, farm-nonfarm place of residence, and perhaps other factors as well. But unfortunately, time series data, cross-tabulated on such a fine breakdown, are not presently available for a sufficient number of years. As more detailed data become available, models such as the one presented here should be estimated for the more detailed subgroups, such as white teenage males. In the meantime, however, further analysis can be done with existing data, as discussed later.

In using the recursive model to project poverty data, the assumed unemployment rate (U) for year 1970 was plugged into equations (9-1.3) and (9-2.3) to estimate the unemployment rates $U_{w,\,1970}$ and $U_{n,\,1970}$ that would occur for whites and nonwhites, respectively. These values were then applied in equations (10-1.3) and (10-2.3), respectively, along with assumed values of M_{1970}, the projected national median income in year 1970, to estimate median income for whites, $M_{w,\,1970}$, and nonwhites, $M_{n,\,1970}$. These values were then substituted into equations (11-1.4) and (11-2.4), respectively, along with the appropriate unemployment rates, to calculate a projected incidence of poverty for each racial group for 1970. Similar projections were made for 1975. These poverty rates were then applied to projected population data to obtain projected numbers of white and nonwhite families in poverty in 1970 and 1975, given alternative assumptions regarding the state of the national economic environment.

It is a well-established fact that the rate of economic growth and aggregate demand, as reflected in projected values of national median income, are not unrelated to the unemployment rate that occurs during the same period. Therefore, in using this system of equations to make projections, it was desirable to use a mutually consistent and reasonable combination of values for U and M. To this end, the projections published by the Joint Economic Committee were used (5). These projections were elaborately and painstakingly developed in the Office of Business Economics, U.S. Department of Commerce. Two alternative general economic conditions were assumed. Situation A includes a 3-percent national rate of unemployment, a 4½-percent annual rate of real growth in GNP, and a 2-percent annual increase in the price level. Situation B includes a 4-percent unemployment rate, and related levels of the other data, as shown in table 2, along with the resulting 1970 and 1975 projections of U, M, and P for whites and nonwhites. The assumed values of U and M obtained from the Joint Economic Committee are by no means the only reasonable alternatives. Nor are these values necessarily correct. However, they are used in the present analysis to provide some reasonably accurate and hopefully useful estimates of the relation between the key attributes of the economic environment—growth and unemployment—and poverty projections.

TABLE 2.—*Basic data and projections to 1970 and 1975*

Item		1968	Situation A 1970	Situation A 1975	Situation B 1970	Situation B 1975
Unemployment rate [1]	percent	3.2	3.0	3.0	4.0	4.0
Growth rate of real GNP [1]	do	5.3	4.5	4.5	4.0	4.0
Annual price rise [1]	do	4.0	2.0	2.0	1.5	1.5
Disposable personal income (DPI) per capita (1958 dollars) [1]		2,106	2,640	3,060	2,625	3,005
Assumed ratio of median income to DPI per capita [2]		2.900	2.9	2.9	2.9	2.9
Median income:						
1958 dollars [3]		6,106	7,656	8,874	7,612.5	8,715.5
1968 dollars [4]		6,309	9,222.5	9,590.7	8,175.8	9,306.5
Projections						
Unemployment rate:						
White	percent	3.3	2.6	2.6	3.6	3.6
Nonwhite	do	6.8	4.8	4.8	7.1	7.1
Median income (1968 dollars):						
White		8,838	9,630	10,888	9,300	9,849
Nonwhite		5,638	6,028	7,061	5,862	6,882
Poverty incidence:						
White	percent	12.3	10.8	8.8	11.1	9.1
Nonwhite	do	37.4	29.6	25.1	30.5	26.2

[1] Source: Joint Economic Committee (5).

[2] Based on observed ratios for past two decades.

[3] Calculated as 2.9 times DPI per capita.

[4] The 1968 implicit price deflator for personal consumption expenditures, 122.8, was used to adjust to 1968 dollars. Source: The 1969 Economic Report to the President, p. 228.

The unemployment rate in 1964 was 4.6 percent for whites, and 9.8 percent for nonwhites. According to the projections shown in table 2, white unemployment would decline by 2 percentage points, or less than half the 1964 rate, if national unemployment reached 3 percent (as represented by situation A). Nonwhite unemployment would decline by 5 percentage points, or slightly more than half—from 9.8 to 4.8 percent. These findings are consistent with those of Thurow (*12*) presented earlier.

With the less favorable economic environment (situation B—4 percent unemployment, slower growth rate) white unemployment would fall only 1 percentage point from its 1964 level, and nonwhite unemployment would fall 2.7 percentage points, to 7.1 percent.

The median income for white families in 1964 was $6,858, and for nonwhite families, $3,838. This left a spread of $3,020 between whites and nonwhites. By 1975, white median income would rise to $10,000 assuming situation A, while the nonwhite median would reach $5,913, leaving a spread of nearly $4,100 between racial groups. But if situation B is assumed, white median income would rise only to $9,949, while nonwhite income would reach $5,662—thus leaving both groups with less income and providing an even wider interracial income gap.

In 1964, 15.3 percent of all white families and 37.4 percent of nonwhite families had incomes under $3,000. For the United States as a whole, 17.5 percent of all families were poor, according to this admittedly crude index of poverty. By 1975, assuming situation A, the incidence of poverty among white families is projected to decrease by nearly half, from 15.3 to 8.8 percent, while nonwhite poverty would decline by a third, from 37.4 to 25.1 percent. Thus, even under favorable economic conditions, nonwhites would still have a rather high incidence of poverty. This occurs despite their rather sharp employment gains, as noted by Thurow (*12*) and by my analysis. Perhaps this is an indication that many nonwhites get lower paying jobs, and remain poor.

If situation B prevails, nonwhites will have a somewhat higher incidence of poverty—1.1 percentage points higher than with situation A. But white poverty would be only 0.3 point higher. Thus, these projections indicate that nonwhites have relatively more to gain from full employment and rapid economic growth than do whites, as suggested earlier.

Applying the poverty rates to the projected population data, we estimated the number of poor white and nonwhite families, as shown in table 3. Lampman's projections (*6*) are also shown for comparison.[6] Under situation A, 4.5 million white families and 1.46 million nonwhite families would be poor by 1975. This would reduce the number of poor families by some 2.4 million, of which 2 million are white. But even under this rather favorable economic environment, nearly 6 million families would remain in poverty. This excludes unrelated individuals.

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[6] It would be unfair to Lampman to fail to point out that his projections were based on data up to 1962, while the analysis presented here had the advantage of 3 more years of data.

TABLE 3.—*Projected number of poor families by color, and change in number, 1964 to 1970 and 1975, United States*

Income and color	1964[1]	1970			1975		
		Lampman[2]	Situation A[3]	Situation B[3]	Lampman[2]	Situation A[3]	Situation B[3]
Families:							
White ....millions....	43.081		[3]47.3			[3]51.3	
Nonwhite ....do....	4.754		[3]5.3			[3]5.8	
Total ....do....	47.835		52.5			57.1	
Under $3,000 income:							
White ....percent....	15.3	13	10.8	11.1	12	8.8	9.1
Nonwhite ....do....	37.4	26	29.6	30.5	33	25.1	26.2
Total ....do....	17.5	16	12.7	13.1	14	10.5	10.8
White ....millions....	6.590	6.2	5.11	5.25	6.2	4.51	4.67
Nonwhite ....do....	1.778	1.9	1.57	1.62	1.9	1.46	1.52
Total ....do....	8.378	8.1	6.68	6.87	8.1	5.97	6.19
Change from 1964:							
White ....thousands....	——	—390	—1,480	—1,340	—390	—2,080	—1,920
Nonwhite ....do....	——	+122	—208	—158	+122	—318	—258
Total[4] ....do....	——	—268	—1,688	—1,498	—268	—2,398	—2,178

[1] Source: Census Technical Paper 17, Sept. 1967.
[2] Source: Lampman (*6, table 2.8*).
[3] My projections, as discussed in text.
[4] Calculated as the arithmetic sum of data for whites and nonwhites.

Comparing these projections with those resulting from situation B, we see that a smaller reduction in poverty would result in the latter case. Because of the greater unemployment and lower incomes, about 220,000 additional families would be left in poverty. Most of these—160,000 families—would be white, because of the preponderance of whites among the nation's poor. The other 60,000 families would be nonwhite.

Further Work Is Needed

The projections shown here are tentative. They are based on a rather modest predictive model, which is not a complete representation of the extremely complex economic and social structure that underlies employment, economic growth, and poverty. Much additional study and analysis are needed in this fascinating and important area of research. Among other things, the labor force participation rate as used by Mooney *(7)*, should be worked into the model in a meaningful way. Variables such as education, migration, and distance from an SMSA should be considered. Methods should also be explored for introducing some operational policy variables. For example, Thurow *(12)* used the minimum wage as a variable. Perhaps the unemployment rate and median income of various subgroups are influenced by the number of persons in these subgroups participating in antipoverty programs, or in manpower development and training programs. If so, the magnitude of subgroup participation should be incorporated into the model, in a way that makes economic sense.

The results could provide policymakers with insight into the overall effects of cutting back or expanding such programs. How rapidly would poverty in each population subgroup disappear over the next few years if one of these major antipoverty programs was (a) increased 100 percent, (b) kept at its current level, or (c) abolished entirely? What would be the geographic variation among the various regions in regard to the impact of a proposed curtailment of program benefits? How would the different racial, ethnic, and age groups be affected? These and other policy-oriented questions must be answered. Perhaps the approach presented here will be a useful starting place for research bearing on these questions.

Conclusions

This paper provides projections of the number and racial composition of poor families to 1970 and 1975. The rather crude poverty line, $3,000 family income, was used. However, evidence presented elsewhere *(1)* suggests that the results may not have been greatly different if poverty data based on a more refined set of poverty lines were available and were used in the analysis. Thus, it seems safe to conclude, tentatively at least, that the equations presented here are a good approximation of the way the number and racial composition of the nation's poor are affected by economic growth, aggregate demand, and unemployment.

With the usual warning to the reader as to the tentative nature of these findings, we can conclude the following:

(1) A favorable economic environment, including a rapid rate of economic growth, rising aggregate demand, and high levels of employment, are essential to reduction of poverty.

(2) Nonwhites in particular are vulnerable to unemployment and a generally low level of economic activity.

(3) By the year 1975, even with a consistently favorable economic environment, including 3 percent unemployment, 4½ percent GNP growth rate, and 2 percent annual rise in price level, the nation's poor families would still number about 6 million. About a fourth of these would be nonwhite.

(4) Thus, even though a favorable economic environment is necessary, it is far from sufficient. We must still look to special programs, to prevent families from sinking into poverty and to help poor families rise out of poverty.

Clearly, we as a nation cannot be satisfied with past trends, as reflected in the projections shown here. These projections need not become history. We must find ways to alter these trends. The projections shown here represent both a warning to those who handle the nation's economic policies, and a challenge to those who legislate and administer antipoverty programs, at all levels of government—National, State, and local. In their hands is the power and the responsibility to prevent these projections from becoming history, by initiating new programs and supporting successful existing programs that will enable those millions of families to be above poverty by 1975—or sooner.

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Chapter 31

Adequate Aggregate Demand and the Commitment to End Poverty

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Introduction

This paper has a number of aims. The major one is to examine the meaning of the phrase "an adequate aggregate demand" in the light of a commitment to end or drastically limit poverty in the near future, say by 1976. Thus the main concern is with the relation between aggregate demand (and its correlate, the level of unemployment) and progress in the War on Poverty. However, aggregate demand is also related to other measures of system performance, and the interrelations between full employment and other policy goals are explored.

The goal—end poverty in America—makes the size distribution of income an object of economic policy. Given that the world is so constructed that the various goals are not necessarily compatible, the trade offs among goals become relevant. There are two sources of trade offs. One source lies in the technical characteristics of the economy and the other in the nature of communal preferences.

Of particular interest, especially in light of the way in which the economy retreated from full employment during the late summer of 1966, is whether the American economy is flawed, and if so, how. A standard view is that prices rise at unacceptable rates whenever unemployment rates fall below some threshold. However, the low unemployment rates which lead to price increases are high unemployment rates from a viewpoint which emphasizes employment as the essential element in a War on Poverty. The standard position leads to the disheartening conclusion that the War on Poverty must be fought with overall unemployment rates of 4 percent or more unless, by the time-consuming and costly process of training and education, the structural characteristics of the economy can be changed.

An argument of this paper will be that the really serious flaw of American capitalism is not any such inverse relation between unemployment rates and price increases. Rather the meaningful flaw follows from the effect of successful operation of the system on the values of financial and real assets and through them on the willingness to invest. If a period of sustained tight full employment is necessary to achieve War on Poverty objectives, the same sustained tight full employment will breed a nonsustainable rate of increase of investment expenditures. Such growth of investment leads to financial market pressures on liquidity and ultimately to financial instability.

Aggregate demand will be adequate, from the perspective of the policy goal to eliminate poverty, only if it is sufficient to generate tight full employment. There are five ways in which labor market conditions may be related to the extent and trend of poverty. Most directly affected will be the extent of poverty due to unemployment and short time employment. In addition, if tight employment is sustained, the expectation is that wages will rise faster in the low wage industries than in the high wage industries. Labor market participation is sensitive to overall employment opportunities; thus multiple participation in one family, perhaps taking the form of drawing old and young into the labor market, will raise family income. The movement to tight full employment means a rapid increase in income which, in turn, means large tax receipts and smaller welfare expenditures by State and local governments. This easier fiscal position of "local" government can make a more adequate system of transfer payments possible. Finally, the overall growth rate of the economy may be sensitive to the extent to which current output is capacity output; thus tight full employment may mean a greater rate of growth of capacity income.

Poverty in an affluent economy is in large part a question of the size distribution of income and, in particular, income from work. Unfortunately, little of real substance is known about the mechanics by which relative wages, and thus relative incomes, are determined. Is the size distribution of income a result of the past employment history of the economy? That is, will tight labor market conditions for an extended period decrease the spread of wage rates, or weekly earnings, by industry?

It is worth noting that the low end of the size distribution of relative wages can change in two ways. The low end may be decreased by increasing low wages relative to high wages or by decreasing the proportion of employment in the low wage industries. The existence of a large rural population living in poverty may act as a reservoir that makes the elimination of urban poverty very difficult. That is, the large number of rural poor serves to prevent both a rise in the low urban wages relative to other wages and a significant decrease in the proportion of the urban population in low wage industries. An economy in which such an infinitely elastic supply of low wage urban workers exists may be characterized as an enclave economy.

One caveat is necessary before we proceed. Among those living in poverty are many whom policy neither desires nor expects to be in the labor force. These include the aged, the infirm, the young, and the mothers of young. The standard of living of these poor can be raised by improving our system of transfer payments as well as by better job opportunities. This paper is not directly addressed to the proper design of a system of transfer payments although some thoughts on children's allowances, negative income taxes, and a proper social security system are offered.

From the perspective of this paper, rural poverty is a part of the general poverty problem in the United States. The special impact of rural poverty is that to date rural areas have been a source for a chronic migration to urban areas, and this flow is expected to continue. Thus policies to generate tight full employment, which will be the main proximate policy goal favored here, will have to be framed with a need for the urban labor markets to absorb a large and persistent flow from rural areas.

As the gross outmigration per year from rural America is very large compared to the net outflow per year, the potential rate of increase in the urban labor force due to internal migration is much greater than has been experienced. Thus the job generation and the level of aggregate demand needed to achieve any overall measured unemployment rate is greater than it would have been in the absence of such migration.

An Adequate Aggregate Demand

One of the phrases that constantly occurs in discussions of programs to end poverty is "an adequate aggregate demand." Usually, in context, "adequate aggregate" demand provides the framework within which some nonaggregative policy or program, that is, a policy or program designed to affect some structural attribute of the economy, is to take place. That is, aggregate demand is to provide the favorable environment within which some other policy or program is to function. Almost always, within such discussions, an adequate aggregate demand is taken to be a necessary but not a sufficient condition for the attainment of some antipoverty goal. In a number of previous pieces related to issues of poverty in America I have raised the question of whether achieving and sustaining a truly "adequate" aggregate demand would be a sufficient as well as a necessary condition for the elimination of a large portion of poverty (*5, 6*).[1]

Whether or not aggregate demand is adequate can be determined only if the targets or goals set for the economy are stated and if some theory or model of the relationship between aggregate demand and these goals is accepted as valid. That is, aggregate demand is not a goal in itself. Full employment, economic growth, reasonable price stability, and the international stability of the dollar are the standard set of economic goals whose attainment has been related to the level of aggregate demand.

Within the model of the economy that is "accepted" by most working economists there are "trade offs" among these goals. These trade offs are due to the performance characteristics of the economy. As a result of these "technical" trade offs, a consistent social consensus which states the relative values of the various goals is needed if decision-making is to be rational and stable. Basically, in our democracy it is the Congress and the President who in the short run make the social choices. Unfortunately, on many occasions their decision-making is not based upon clear ideas as to what technical trade offs do exist in the economy.

Many who, because of the decisions they make, should know better have a "Pollyanna" view of the world: that all good or desired things are mutually compatible. Often decision-making seems to take place without regard for the possible existence of such incompatibilities and as a result considerable surprise occurs when unanticipated side effects to the pursuit of a particular goal take place.

For our purposes two things need to be done. The first is to make explicit the nature of the trade offs that exist in the world as it is among major policy objectives. The second is to inquire how the addition of another goal, the elimination of poverty, affects the weight attached to the various other objectives—i.e., makes them more or less important.

In what follows it is assumed that the size and rate of change of aggregate demand can be managed by monetary and fiscal policy. This assumption is being retained even though the events of 1966, especially during the second and third quarters, cast serious doubts on the efficiency, under all circumstances, of monetary and fiscal actions.[2] In addition, even if monetary and fiscal policies can manage aggregate demand, there are important effects from varying the mix of policies. We will tend to ignore these difficulties, especially as they have been very well documented.

In addition, it is necessary to emphasize that even the aggregate policy actions—monetary policy, government spending, and tax schedule adjustments—have a structure. A choice among techniques of managing aggregate demand needs to be made, and this choice will affect behavioral and distributive aspects of the economy. Thus the choice of instruments will also reflect the weights attached to different policy objectives.

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[1] Italic numbers in parentheses indicate references listed at the end of this paper.

[2] During the second and third quarters of 1966 the combination of rapidly increasing private investment demand, the increase in government expenditures brought about by the war in Vietnam, the passive fiscal policy, and the reliance upon monetary constraint led to a near financial crisis that has been labeled "the crunch." The crunch apparently cooled off the investment boom and was followed by a year of relative stagnation. The open question is whether the crunch was an accidental or an inherent characteristic of American capitalism.

Trade Offs Among Standard Goals

In the world *as it is*, a number of trade offs related to aggregate demand exist among the attributes of the economy. The dimensions of these trade offs depend upon the structural characteristics of the economy. For policy makers, these structural characteristics are real and effective constraints. This is so even though structural characteristics may also be subject to control by economic policy. Typically, changing a structural characteristic (such as the power and scope of trade unions, the character of agricultural policy, the organization of industry, the nature of the financial system, or the propensity to discriminate and segregate) is a much more serious and difficult policy step than changing tax and spending schedules or taking monetary policy actions. Thus, because structural characteristics are embodied in fiscal and monetary policy actions (investment tax credits and differential ceiling rates on various classes of deposits) and also because they occur as offsets to fiscal and monetary policy actions (the various constraints upon direct and financial investment abroad adopted during the past few years), structural characteristics cannot be ignored in making policy relative to aggregate demand. That is, for relevant policy discussions an economist cannot be cavalier and blithely, by waving his hand, abstract from the existing set of institutions and their behavior patterns.

An often-discussed trade off in performance among policy goals related to aggregate demand is between employment on the one hand and price stability on the other.

Within limits, employment is positively related to aggregate demand. The limit to this relation is given by full employment. As full employment is approached, increases in aggregate demand tend to raise prices. At full employment further increases in aggregate demand are absorbed entirely in price increases—at some level below the full employment level increases in aggregate demand result in a rise both in employment and in prices. The "Phillips curve"[3] analysis attempts to measure the relation between measured unemployment rates and the percentage increase in wage prices per period. The argument of the Phillips curve analysis is that beyond a certain point, decreases in unemployment will be associated with rising wages and prices and that the price, in terms of rising prices, of lowering the unemployment rate increases at an accelerating rate as the measured unemployment rate decreases.

Some warnings about Phillips curve reasoning are in order. First, the rise in prices—or wages—has been associated not only with the unemployment rate but also with the rate of change of the unemployment rate. The evidence as to the behavior of wages and prices in relation to the unemployment rate derived while unemployment rates were falling should not be used without further thought to forecast the behavior of wages and prices when unemployment rates are stabilized at some particular rate.

Secondly, as will be shown, there has been a marked change in the structure of earnings by industry since the end of World War II. The rate of increase of earnings that was obtained in some industries is sufficiently low so that if this rate were quite general, the pressures that tend to raise prices through wages would have been much smaller than actually took place.

In addition, structural characteristics of the economy—in particular those dealing with labor's geographical mobility and facilities for occupational training—will determine how easily job vacancies can be filled. Thus the scope of manpower-oriented nonaggregative policies is determined by their ability to position the Phillips curve so that a lower unemployment rate and a higher rate of decline of unemployment are associated with every rate of increase of prices.

We conclude that for any economy there is a relation that depends upon the structural characteristics of the economy and that states the cost in terms of the price increases of a given level of unemployment and a given rate of decrease of unemployment. During expansion, the level and rate of increase of aggregate demand generates a benefit (measured by the unemployment rate and the rate of decrease of unemployment) at a cost (measured by the rate of increase in prices). The question is whether the benefit is worth the cost.

One of the clearest relationships that exist in our economy is between aggregate demand and the import component of the balance of payments. As aggregate demand increases, in particular when a rapid run up of income that accompanies a rise in the ratio of employed to employable resources takes place, imports also rise. Thus there is a clear cost in terms of a tendency toward a deterioration in the balance of payments of increasing aggregate demand or increasing employment.

Even though the effect of current imports upon the balance of payments may be adversely affected by a decline in unemployment rates, the overall effect of rising aggregate demand upon the balance of payments depends upon capital movements as well as trade movements. The propensity of American business to invest abroad—particularly in the advanced countries of the world—may be sensitive to the level and growth of markets abroad relative to the level and growth of markets within the United

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[3] The Phillips curve is a relation between unemployment and wage or price increases (*8*; see also *3*, *4*, *9*).

States. Thus, for the United States, during a period of chronic slack the deficit in the balance of payments may be heavily weighted by long term capital exports, whereas a period of rapid growth and high employment is associated with a decline in capital exports and a run up in the current imports component of the balance of payments.

In addition to the direct effect upon the balance of payments from rising aggregate demand, which operates by way of imports and capital movements, there is an indirect effect running by way of the price level changes to the balance of payments. That is, a rise in home prices relative to prices of trading partners and competitors in a foreign country will adversely affect the balance of trade. Thus, increasing aggregate demand to lower unemployment rates will adversely affect the balance of payments via two paths. It is clear that those who weight the balance of payments goal heavily will tend to define as adequate a lower level of aggregate demand than would those who did not consider balance of payments equilibrium as a leading objective.

The particular structural attributes of interest with respect to the balance of payments are tariff rates—including interest equalization equivalents—and various direct or administrative controls upon capital exports and commodity imports. Another structural attribute related to the balance of payments—one that will be considered when policy implications are discussed—is the international monetary system.

The fourth standard goal of aggregate policy is economic growth. In the policy discussion of growth and growth rates two things have been confused. These are the achieved rate of growth of actual income and the rate of growth of capacity, or full employment, income. When the economy moves from a period of considerable slack, as in 1960–61, towards a period in which capacity is more fully utilized, as in 1966, the achieved rate of growth of income exceeds the rate of growth of capacity. The policy goal of economic growth deals with the growth of capacity, not with the rates of growth achieved during a shift from a slack economy to an economy of relatively full employment. Nonsustainable rates of growth of income can be attained during a business cycle expansion as previously idle capacity is absorbed.

The relation beween aggregate demand and economic growth correctly defined is clear if large-scale excess capacity (unemployment) exists. Under these circumstances excess capacity acts as a damper on any scale increasing investment. In addition, the general low level of profits (especially as measured by net corporate cash flows) acts as a damper on the financing of innovations. Thus, large-scale unemployment or its equivalent, grossly inadequate aggregate demand, tends to decrease the rate of growth of capacity.

However, this does not mean that there is necessarily a marked difference in the rate of growth of capacity income during a period of "high level stagnation" such as 1953–60 and a period of a relatively full employment such as 1961–66. The evidence that higher capacity utilization is related to higher growth rates centers around the rate of growth of investment as compared to total income or consumption. If investment grows more rapidly, relative to income, during a period of high level employment than during a period of more unemployment, then there is some presumption that capacity is growing more rapidly.

In table 1 the take off of investment, starting in the first quarter of 1965 and continuing through the second quarter of 1966, is evident. Thus during a year and a half, while aggregate demand was increasing rapidly (note the increasing rate of increase of the gross national product (GNP) implicit price deflator), the ratio of investment to GNP was increasing. We can presume that the economic buoyancy reflected in the rate of growth of investment meant that technical progress was being "welcomed" by investors. All in all, the evidence of this expansion is that some investment impact can be expected from a sustained expansion, an impact that might lead to a rise in the rate of growth of capacity.

Table 1 incidentally also illustrates an instability in the pattern of growth of actual income over the 2 years 1964–66 that might "explain" part of the acceleration in the rate of increase of prices, as measured by the GNP deflator, over this period.

The expansion prior to the first quarter of 1965 exhibited fairly consistent rates of growth of capacity, consumption, and investment—with investment being a bit "jumpy." Through most of this period government expenditures lagged. Between the second quarter of 1963 and the second quarter of 1965 the rate of increase of government spending was much lower than the rate of increase of gross national product. The public sector was not a leading sector.

Beginning with the first quarter of 1965 and continuing for six quarters, the rate of increase of investment expenditures reached clearly unsustainable levels: Investment cannot long continue to grow at the rates shown in table 1 while aggregate capacity grows much more slowly. The rapid growth of investment activity meant that the incremental pattern of production and employment was dissimilar to the initial condition pattern.

Beginning in the fourth quarter of 1965 a rapid increase in government expenditure began. For the last two quarters (fourth of 1966 and first of 1967) the rate of growth of government expenditure has been more than twice as great as the high estimates of how fast the economy can grow.

Thus the observed growth of income since 1961 can be split into three parts: the first characterized by a rather balanced private sector with a lagging government, the second during which private investment became a leading sector growing at a nonsustainable rate, and a third during which private investment slackened precipitously and government

TABLE 1.—*Gross national product, components thereof and the gross national product deflator: annual rates of changes in year following initial quarter (1958 dollars)*

Initial-terminal quarter	GNP	Consumption	Investment	Government	GNP price deflator
II 61–II 62	7.1	4.7	16.5	8.3	1.4
III 61–III 62	6.4	5.0	13.2	5.7	1.2
IV 61–IV 62	5.2	4.6	8.0	5.4	1.1
I 62–I 63	4.1	4.6	1.9	4.5	1.1
II 62–II 63	3.5	4.5	2.0	.8	1.3
III 62–III 63	4.0	4.7	3.1	2.0	1.3
IV 62–IV 63	4.4	3.8	8.7	.9	1.4
I 63–I 64	5.3	4.9	7.5	.1	1.5
II 63–II 64	5.9	5.7	6.2	4.2	1.5
III 63–III 64	5.5	6.6	3.1	1.2	1.8
IV 63–IV 64	4.5	5.9	2.9	.6	1.8
I 64–I 65	5.4	5.9	13.4	1.1	1.7
II 64–II 65	5.1	5.7	11.3	−.1	1.9
III 64–III 65	5.7	5.1	14.2	3.3	1.7
IV 64–IV 65	7.5	7.3	13.3	5.9	1.7
I 65–I 66	6.7	6.6	7.9	6.1	2.3
II 65–II 66	5.9	5.1	11.5	6.4	2.8
III 65–III 66	5.1	4.9	4.7	8.6	3.3
IV 65–IV 66	4.1	3.0	4.1	10.0	3.5
I 66–I 67	2.6	2.2	−7.5	12.9	3.3

Source: Federal Reserve Bank of St. Louis.

became a leading sector growing at a nonsustainable rate. As the growth of actual income shifted from being balanced, to being led by investment, to being led by government spending, the rate of increase of prices accelerated.

Of course this acceleration in the rate of increase of prices was also associated with a decrease in the unemployment rate. The raw data seem to validate a Phillips curve type of relation—but the attainment of rate of increase of the GNP deflator in excess of 2 percent per year occurred only after these gross structural changes in the growth pattern took place. For policy considerations, where sharp shifts in the composition of output are not contemplated, the relevant question has to deal with the rate of increase of prices in a more stable and sustainable growth pattern.

The structural characteristics that affect the relation between aggregate demand and economic growth mainly operate through "tax" system characteristics. Most models of economic growth emphasize investment as the carrier of innovations as well as the vehicle for expanding productive capacity. Thus, shifting the composition of total demand by decreasing the consumption-income ratio and raising the investment-income ratio becomes a proximate policy objective. In part, the instruments to achieve this are rulings relating to depreciation allowances and items such as investment tax credits. The items introduced into the tax side of fiscal policy to expedite growth tend to be regressive changes in the progressiveness of the tax schedule.

On the spending side of fiscal policy, emphasis upon subsidizing research and education—both of which generate demand for skilled and already highly paid persons—has been a corollary to emphasizing growth as an objective. In many ways emphasis upon economic growth will tend to shape tax and spending policies in favor of the already affluent.

An emphasis upon economic growth tends to downgrade job-security-centered objectives of labor: the tendency is to substitute policy guaranteeing jobs in general for policy guaranteeing the particular job. However, "featherbedding" seems to be an issue in the United States only when unemployment rates are high. The U.S. labor force seems willing to accept changing techniques and seems to demand very little compensation for the loss of job security.

The Elimination of Poverty as a Policy Goal

To the standard policy goal of full employment, reasonable price stability, balance of payment equilibrium, and economic growth a new major policy goal has been added—end poverty in a reasonably short time. I will assume the above is true in spite of recent political setbacks to the program. How does the addition of this goal affect the "weight" to be attached to the other goals.

If increasing employment helps reduce poverty now, whereas economic growth is neutral toward reducing poverty now and will affect the proportion in poverty only in the long run, then the weight of employment relative to growth increases. Thus, the mix of policies will lean towards achieving more of those goals which help eliminate poverty and lean away from achieving those goals which either do nothing to alleviate poverty or worsen the poverty problem.

The dimensions of the poverty problem have been stated most often in terms of the number of households or persons whose income falls below some standard. Although this minimum income approach is a simple way of posing the problem, it does lead to quibbles as to the appropriate "poverty" line. In addition it has the grave fault that it opens the way to a fundamentally superficial solution to the serious problem: give the present poor enough "money" by way of transfer payments and services in kind to bring them up to the minimum standard of disposable income.

An alternative is to view poverty as a problem in the distribution of income. The scope of the poverty problem is broadened to include the determinants of the size distribution of income, and policy with respect to poverty becomes policy with respect to income distribution.

From the perspective of "poverty" income, distribution problems can be broken into two parts. The first part is the Ricardian "factoral" distribution of income between the classical trio: land, labor, and capital. The second part is the size distribution of earnings from labor. The problem thus becomes the determination of relative wages among different industries and occupations.

Adding the elimination of poverty to the policy objectives affects the significance of other policy goals in two ways. First, there is the direct relation between the goal and the extent of poverty. Second, there is the relation between the particular goal and income distribution—in particular the distribution of income from labor.

Tight Full Employment

Introduction

In the light of the campaign against poverty the importance of full employment as a policy goal increases. The American economy operated with considerable labor market slack—even accepting a very modest definition of employment goals—starting in 1954 and continuing through 1965. The income gap between potential and actual income was greater even in 1966 than would have been needed to move all those then living in poverty well above the "line" used to define poverty. That is, the lot of those living in poverty could have been substantially improved without requiring the lot of anyone else to deteriorate.

To the extent that the War on Poverty has social as well as economic targets, the importance of full employment as a policy objective is enhanced. The value to society of jobs for the chronically unemployed may be significantly greater than the value of output produced; employment has external social benefits. That is, it may be better to eliminate poverty by means of income from jobs than to eliminate poverty by transfer payments. The above proposition is taken as a postulate in what follows, as is the proposition that general and by right transfer payments are preferable to special and by discretion (case) transfer payments. The rationalization of these postulates lies in sociology and ethics.

In 1965 some 6.7 million families (11.5 million households) were "poor" by the standard definition. Of these poor families, some 4.8 million were headed by a male and some 1.9 million were headed by a female. Of the 4.8 million poor families headed by a male, some 2.7 million were poor in spite of the fact that their head worked at a full-time job during the year. About 1.7 million of these male heads of families were employed full time during the year.

Almost half of the families living in poverty in 1965 would certainly have benefited from better labor market conditions, and some 60 percent of these families would have benefited only if income from jobs were raised. The other 40 percent would have benefited directly from lower unemployment.

Between 1962 and 1965 the overall unemployment rate fell from 5.5 to 4.5 percent. In the January 1964 Report of the Council of Economic Advisors, some 9.3 million families were listed as living in poverty in 1962. The January 1967 Report lists some 6.7 million families living in poverty in 1965. The reduction of the aggregate unemployment rate and economic growth was associated with a reduction by some 28 percent of the number living in poverty over a 4-year period. In spite of the reduction in the number of families living in poverty, it remained true in 1965 that at least half of the families living in poverty do so either because of unemployment or because of low incomes from jobs.

Given that the poverty problem remains largely a question of job opportunities, the precise definition of the employment objective remains an open question. Definitions of full employment in terms of wage-price and unemployment relations are quite common. This aggregate Phillips curve approach has tended to generate definitions of full employment that lead to slack labor market conditions. From the perspective of the War on Poverty, a better definition of the full employment objective would be in terms of labor market conditions. Perhaps a useful definition would be that full employment exists whenever, over a broad spectrum of occupations and demographic attributes of the population as well as a large proportion of the geographical regions, more jobs are open at going wages than the number of unemployed workers. This definition of full employment is in terms of desired labor market conditions. It will be called tight full employment in what follows. It allows for inconsistency to exist between employment and price level goals, whereas defining target unemployment rates in terms of the Phillips curve does not. In addition, the Phillips curve approach seems to beguile policymakers and analysts into cutting the employment goal to fit the price level stability cloth.

For practical purposes it is more convenient to define full employment in terms of a target-

TABLE 2.—*The poor and their work experience, 1965* [1]

Work experience of head of household	Poor households (millions)[2]		Poor families			
			Number (millions)		Incidence of poverty (percent)[3]	
	Male head	Female head	Male head	Female head	Male head	Female head
Total	6.1	5.4	4.8	1.9	11	37
Aged (65 years and over)	1.8	2.4	1.2	.3	21	29
All others	4.3	3.0	3.6	1.5	10	40
Did not work in 1965	.7	1.5	.5	.8	38	66
Ill or disabled	.4	.2	.3	.1	42	(4)
Other reasons	.3	1.3	.2	.8	33	66
Worked at part-time jobs	.5	.5	.4	.2	34	44
Worked at full-time jobs	3.0	1.0	2.7	.5	8	23
Employed 39 weeks or less	.8	.4	.6	.2	23	49
Employed 40–49 weeks	.4	.1	.4	.1	13	24
Employed 50 weeks or more	1.8	.4	1.7	.2	6	15
0–3 children	1.0	.1	1.0	.1	4	11
4 or more children	.7	.1	.7	.1	17	65
South [5]	.9	.2	.9	.1	11	24
White [5]	.5	.1	.5	(6)	7	11
Nonwhite [5]	.4	.1	.4	.1	36	51
Rest of country [5]	.9	.3	.8	.1	4	10
White [5]	.8	.2	.7	.1	4	8
Nonwhite [5]	.1	.1	.1	(6)	10	22

Source: 1967 Economic Report of the President, p. 139.

[1] Numbers in this table are based on the Current Population Survey. An enlarged survey of the poor, now in progress, may show somewhat different results due to sampling error and the use of different interviewing techniques.

[2] Households are defined here as the total of families and unrelated individuals.

[3] Poor families as percent of the total number of families in the category.

[4] Percent not shown because of small number of families.

[5] Estimated by Department of Health, Education, and Welfare.

[6] Less than 50,000.

Note. Poverty is defined by the Social Security Administration poverty-income standard; it takes into account family size, composition, and place of residence.

Detail will not necessarily add to totals because of rounding.

measured unemployment rate, accepting a particular measurement technique as generating, if not a good count, at least a good index. The Council of Economic Advisors has taken as an "interim" goal a 4-percent measured unemployment rate. By their measurement technique the United States was at the interim full employment target in the fourth quarter of 1965 and remained at or below this target throughout 1966. In what follows it will be argued that a 2.5- to 3.0-percent measured unemployment rate is a better definition of full employment. By this definition even in 1966 there was a significant gap between potential and actual income.

The Measure of Tight Full Employment

There are as yet no generally available job vacancy data which can be used to estimate the positive or negative excess of vacancies over job openings by race, region, sex, and skill categories. Thus it is necessary to guess at the unemployment rates which should prevail in order to generate tight full employment.

One way to determine the limits to attainable unemployment rates is to examine the experience of other countries. Table 3 presents unemployment rates for 1960–62 for five European countries reestimated to conform to the U.S. definitions. Aside from Italy, all of these countries exhibited rates substantially lower than the U.S. interim target rates of 4 percent.

Gordon (*2*) summarized his findings on unemployment rate targets as follows:

> Today in Western Europe 2 per cent unemployment is the target most frequently mentioned. When translated into American definitions, this may mean an unemployment rate from something below 2 per cent to perhaps 3 per cent as a maximum. Virtually all countries are very loath to announce an official quantitative target. But various scraps of evidence permit one to infer the approximate goal in some of the leading European countries today, expressed in terms of American definitions, about as follows:

	Per Cent
France	2.0–2.5
Germany	1.5–2.0
Sweden	1.2–1.5
United Kingdom	1.8–2.7

The applicability of the European experience to the United States depends upon assuming that labor market operating conditions are similar. One argument that could be made centers around the heterogeneity of the United States labor force. Fortunately, data are available on the structure of unemployment rates by a variety of demographic and skill classes. By setting reasonable targets for such

TABLE 3.—*European unemployment rates re-estimated to conform to U. S. definitions, 1960–62*

Year	France	Germany	Italy	Sweden	United Kingdom
1960	1.9	1.0	4.3	1.6	2.4
1961	1.8	.5	3.7	1.5	2.2
1962	1.8	.4	3.2	1.5	2.8
Average	1.8	.6	3.7	1.5	2.5

Source: Adapted from Gordon (*2*).

demographic and skill classes and assuming that the structure of unemployment rates does not change radically, implications of the various targets for the overall rate can be drawn.

The structure of unemployment rates for each year is defined as the set of specific class rates divided by the overall rate for the year. The variation in the pattern of these rates over years indicates the stability of the structure. These specific class relative rates for various demographic and skill groupings for each year of the current expansion (1961 through 1966) are shown in tables 5, 6, and 7.

Over this period the overall unemployment rate was reduced from 6.7 percent in 1961 to 3.8 percent in 1966. Before examining the specific rates one warning might be in order. The war in Vietnam has led to an increase in the size of the armed services. As a result many of the most employable of the younger white and nonwhite males are not in the civilian labor force. In addition, the uncertainty because of the war raises the cost to the employer of hiring a draft-eligible male. Thus the pattern of unemployment rates for younger males may reflect special circumstances rather than general market behavior as overall unemployment rates are lowered.

Before continuing, it is worth noting that the reduction in the aggregate unemployment rates did not proceed smoothly over the period. The first year of the expansion witnessed a 1.2-percentage point decrease in the unemployment rate whereas in the second year an increase of .2 percentage point occurred. The 3 years following 1963 saw a succession of decreases in unemployment rates: a reduction of .5 percentage point in 1964 was followed by reduction of .7 percentage point in 1965 and again in 1966. This stop-go reduction of unemployment rates placed more pressure on prices in the economy than would have occurred if the decline had been steadier.

Table 5 gives relative unemployment rates for males and females by marital status. It is evident that some change in relative unemployment rates for this classification of the labor force did occur. Unemployment for married men with wife present was reduced from about .7 of the 6.7-percent rate of 1961 to .59 of the 1966 rate of 3.8 percent. Other relative unemployment rates did not change as markedly except for the rate for single females, which increased to 2.05 of the 1966 unemployment rate of 3.8 percent, from 1.30 of the higher 1961 unemployment rate of 6.7 percent. This change in ratio reflects the fact that while the overall rate was falling rapidly, the rates for single women fell by but .9-percentage point.

Married men with wife present are a stable, reliable core of the labor force. Our target for this subgroup should not be significantly lower than the best of the European experience. Thus a target rate for this group of about 1.2 to 1.5 percent—equivalent to the total Swedish target—seems reasonable. This would generate an overall target, using 1966 relative rate, of from 2.4 to 3 percent.

In table 6 the relative unemployment rate by sex and color are given. The expansion has seen some

TABLE 4.—*Unemployment rates and changes in the rate and rates of growth of gross national product, 1961–66*

Year	Aggregate unemployment rate	Change in the unemployment rate	Rate of growth of— GNP Current prices	Rate of growth of— GNP 1958 prices	Rate of growth of— GNP price deflator
1961	6.7				
1962	5.5	−1.2	7.7	6.5	1.2
1963	5.7	+.2	5.4	4.0	1.3
1964	5.2	−.5	7.0	5.3	1.6
1965	4.5	−.7	7.8	5.9	1.8
1966	3.8	−.7	8.6	5.4	3.0

Source: Unemployment data: 1967 Economic Report of the President. Rate of growth data: Federal Reserve Bank of St. Louis, *Triangles of U.S. Economic Data*, Feb. 3, 1967.

TABLE 5.—*Unemployment rates relative to overall rate, by sex and marital status, 1961–66*

Sex and marital status	1961	1962	1963	1964	1965	1966
Male:						
Total	.970	.964	.930	.904	.889	.868
Single	1.955	2.035	2.175	2.212	2.244	2.263
Married, wife present	.687	.655	.597	.539	.533	.500
Widowed, divorced, separated	1.537	1.800	1.684	1.712	1.600	1.474
Female:						
Total	1.075	1.127	1.140	1.192	1.222	1.290
Single	1.299	1.436	1.561	1.673	1.822	2.053
Married, husband present	.955	.982	.947	.981	1.000	.974
Widowed, divorced, separated	1.105	1.164	1.175	1.231	1.200	1.237

significant changes in the structure of unemployment among these demographic classes. For each age group of white males between the 20-24 year group and the 55-65 year group there has been a sharp fall in the relative unemployment rate. Similar significant reductions in the relative unemployment rates for non-whites in the 25-34 through 55-64 year age groups occurred. Given that the relative rates for both white and nonwhite males declined, it follows by arithmetic that the relative rates for females rose.

Given the structure of relative rates, a reasonable target would be to achieve for white males between ages 25 and 54—the heart of the labor force—unemployment rates as good as the best European rates. If we take the German unemployment rate of 1960 as a target for white males 25 through 54, the overall unemployment rate, given 1966's relative rate, would be about 2 percent.

If a 4-percent unemployment rate is adopted as the target for nonwhite males aged 25 to 54, then the target overall rate would be about 3.4 percent.

Table 7 gives the relative unemployment rates by occupations of the experienced labor force. The expansion saw a decrease in the relative unemployment rates of craftsmen, foremen, and kindred workers; operative and kindred workers; and laborers, except farmworkers. The expansion seemingly reversed the trend toward higher blue collar unemployment rates. Whereas the unemployment rate of these blue collar classes decreased relative to the overall unemployment rate, the unemploy-

TABLE 6.—*Unemployment rates relative to overall rate, by sex and color, 1961–66*

Color, sex, and year	Total, 16 years and over	16 and 17 years	18 and 19 years	20–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65 years and over
White male:									
1961	.851	2.463	2.254	1.493	.731	.597	.657	.791	.776
1962	.836	2.746	2.309	1.455	.691	.564	.636	.746	.746
1963	.825	3.123	2.491	1.368	.684	.509	.579	.702	.719
1964	.788	3.096	2.577	1.423	.577	.481	.558	.700	.692
1965	.800	3.267	2.533	1.311	.578	.511	.511	.689	.756
1966	.737	3.290	2.342	1.079	.553	.447	.447	.658	.790
White female:									
1961	.970	2.537	2.030	1.254	.985	.836	.716	.642	.552
1962	1.000	2.836	2.054	1.400	.982	.818	.673	.618	.727
1963	1.018	3.175	2.316	1.298	1.018	.807	.684	.614	.526
1964	1.058	3.288	2.538	1.365	1.000	.865	.692	.673	.654
1965	1.111	3.333	3.978	1.400	1.067	.911	.667	.600	.600
1966	1.132	3.816	2.816	1.395	.974	.868	.711	.579	.711
Nonwhite male:									
1961	1.910	4.627	3.567	2.782	1.925	1.597	1.522	1.567	1.493
1962	1.982	3.982	3.964	2.655	1.909	1.564	1.509	1.746	2.164
1963	1.842	4.737	4.807	2.719	1.667	1.404	1.246	1.298	1.772
1964	1.712	4.981	4.442	2.423	1.481	1.192	1.135	1.558	1.596
1965	1.644	6.022	4.489	2.067	1.378	1.133	1.133	1.200	1.156
1966	1.658	5.921	5.395	2.079	1.290	1.105	1.079	1.158	1.290
Nonwhite female:									
1961	1.761	4.642	4.209	2.911	1.657	1.597	1.105	.940	.970
1962	2.000	5.055	5.673	3.309	2.091	1.618	1.291	.655	.673
1963	1.965	7.035	5.597	3.281	2.053	1.439	1.070	.842	.632
1964	2.039	7.019	5.615	3.519	2.154	1.500	1.173	.731	.423
1965	2.044	8.400	6.178	3.044	1.867	1.689	.978	.867	.689
1966	2.263	9.158	7.684	3.316	2.132	1.111	1.111	.868	1.053

TABLE 7.—*Unemployment rates of experienced workers relative to overall rate, by major occupation groups, 1961–66*

Occupation group [1]	1961	1962	1963	1964	1965	1966
Professional, technical, and kindred workers	.299	.309	.316	.327	.333	.342
Farmers and farm managers	.060	.055	.088	.096	.089	.105
Managers, officials, and proprietors except farm	.269	.273	.263	.269	.244	.263
Clerical and kindred workers	.687	.709	.702	.712	.711	.737
Sales workers	.702	.746	.737	.654	.733	.711
Craftsmen, foremen, and kindred workers	.940	.927	.842	.808	.800	.737
Operatives and kindred workers	1.433	1.364	1.298	1.250	1.222	1.132
Private household workers	.881	.891	.912	.943	.933	.947
Service workers, except private household	1.105	1.164	1.088	1.173	1.222	1.263
Farm laborers and foremen	.851	.782	.965	1.115	1.067	1.079
Laborers, except farm and mine	2.164	2.255	2.123	2.039	2.100	1.921

[1] No rates were given for the group "Persons with no previous work experience."

ment rate among the white collar jobs—professional, technical, and kindred workers; clerical and kindred workers; and sales personnel—increased at least slightly. The argument that there are employment opportunities only for the educated was not borne out by experience in the expansion.

If the policy target is to reduce the unemployment rate of the highly trained and educated professional, technical, and kindred workers to the average unemployment rate in Germany in 1960–62, then the overall rate will be about 1.7 percent with 1966 relative rates. If the policy objective is to reduce the unemployment rate for laborers, except farm and mine, to 4 percent, then the overall unemployment rate would be about 2 percent.

That is, in terms of both the unemployment rates other advanced countries have achieved and the setting of attainable targets for unemployment rates in reasonably homogeneous subclasses of the labor force, an overall rate in the neighborhood of 2 to 3 percent does not seem like a heroic policy target. However, as will be pointed out, some structural changes may be required before this overall rate can be achieved.

Okun's Law

What I choose to call Okun's law (7) states that for each percentage point decrease in unemployment there will be approximately a 3-percent increase in GNP. The evidence from the expansion of 1961–66 is on the whole consistent with Okun's law, although it may indicate that a somewhat smaller increase in GNP per percentage point decrease in unemployment rates takes place.

Table 9 shows that if for each year we subtract twice the decrease in the unemployment rate from the rate of growth of actual real GNP, we obtain estimates of the growth of capacity GNP that clusters clearly around 4.3 percent. If we multiply the decrease in unemployment by 3 rather than 2, we get estimates of the growth of capacity GNP that average 3.7 percent, but the annual estimates have a much wider dispersion. The evidence seems to indicate that a 1-percent point reduction in the

TABLE 8.—*Reasonable target rates of unemployment*

Base class	Class target	Overall rate
	Percent	*Percent*
Married men, wife present	1.2 to 1.5	2.4 to 3.0
White males, age 25 to 54	1	2.0
Nonwhite males, age 25 to 54	4	3.4
Professional, technical and kindred workers	.6	1.7
Laborers, except farm and mine	4.0	2.0

TABLE 9.—*Relation between growth in actual gross national product and decrease in unemployment, 1962–66*

Terminal year	Rate of growth of actual GNP in 1958 dollars	Change in the unemployment rate	Rate of growth of capacity assuming GNP of— 3 percent per percentage point unemployment	2 percent per percentage point unemployment
			Percent	*Percent*
1962	6.5	—1.2	2.9	4.1
1963	4.0	+ .2	4.6	4.4
1964	5.3	— .5	3.8	4.3
1965	5.9	— .7	3.8	4.5
1966	5.4	— .7	3.3	4.0
Average			3.7	4.3

unemployment rate requires a real aggregate demand growth of some 2 or 3 percent more than the rate of growth of capacity. There is no indication in table 9 that carrying unemployment rates down to 3.8 percent saw any change in the general nature of the relation embodied in Okun's law.

Thus to continue to reduce unemployment rates at the rate of .5 to .7 percentage points per year would require a rate of growth of real aggregate demand averaging about 5.5 percent per year. Given the tendency for the GNP price deflator to rise, this may mean that a rise in aggregate demand at a rate of 8 percent per year for 2 years beyond 1966 is needed to bring unemployment rates down to or below a 3-percent overall rate.

If a 2.5-percent measured unemployment rate had ruled in 1966 rather than the observed 3.8 percent, then by Okun's law, as modified above, GNP would have been some 2.6 to 3.9 percent larger. GNP in 1966 was $740 billion. Even at the low unemployment rates of 1966, the cost in terms of GNP of the slack relative to tight full employment was in the neighborhood of $19 to $29 billion. This is much greater than the $11 billion that presumably it would take in transfer payments to lift all now living in poverty well above the poverty line.

It might be argued that the northern European countries were able to maintain such low unemployment rates because they operated with a large number of imported workers. First of all, there is nothing wrong with imported workers or bracero programs if they are carried out in the context of tight labor markets.

In addition, one very large element of flexibility is built into the American economy because of the chronic migration from the rural areas to the urban areas. The gross outflow per year is very large but the net outflow, because of returns to rural areas, is quite modest; therefore, a sizable increase in the rate of increase of the industrial labor force is possible if the urban retention rate rises. The level of urban retention rates seems closely related to urban job opportunities. A rise in aggregate demand that might, under other circumstances, lead to inflationary pressure would under these circumstances lead to faster absorption of formerly rural population into the urban society. Thus, a tighter urban labor market would go far to eliminate rural poverty.

Size Distribution of Earnings

The move from the current slack full employment to a tight full employment will directly benefit those who are in poverty because of unemployment or part-time work. It will not directly benefit those who are in poverty even though they worked full time at a job. For these poor, either a rise in their earnings from work or some scheme of wage supplements is necessary. The expectation is that some of the employed poor will benefit from tight full employment as they move into higher wage jobs. However, some of those who move from being unemployed to employed will move into jobs that yield poverty incomes.

Therefore, one facet of any serious concern about poverty is a concern about the size distribution of income. As long as a substantial portion of those living in poverty—or even close to poverty—do so in spite of working full time during the year, the root of this component of poverty lies in the existence of jobs that pay too little.

Various explanations of the differentials in wage earnings among industries and occupations have been proposed. The current or recent fashion is to explain differentials in earnings in terms of the differences in investment. These investments in humans could be on-the-job training, or craft training, or general education.

However, before we venture a conventional reply to the question of the determinants of relative earnings, it is perhaps best to look at some data. This is especially so because of the wide difference in the average weekly earnings of workers in different industries as well as the changes that occurred in relative earnings during the postwar period.

Our analysis of relative wages takes 1948 as its initial observation. The year 1948 is too close to the end of World War II, with its elaborate wage and price controls, to serve as a model for relative wages. However, 1948 was the terminal year for a protracted period of tight full employment. From 1948 through 1961 the trend was toward higher unemployment rates. The expansion of 1961–66 saw aggregate unemployment rates fall from 6.7 to 3.8 percent. The question is whether the slack affects relative earnings—and whether the gradual tightening over a 6-year period also affects relative earnings. Does chronic labor market slack widen the range of earnings among occupations, whereas a long period of labor market tightness narrows the spread?

The analysis examines relative earnings in the 21 two-digit manufacturing industries plus mining, contract construction, wholesale trade, and retail trade. For each year the wage in each of the 25 sectors is divided by average earnings in all manufacturing to get relative wages.

In 1948, weekly earnings in four industries (table 10) were in excess of 120 percent of the average earnings, and three industries exhibited earnings that were less than 80 percent of the base. In sharp contrast, in 1966 weekly earnings in six industries were in excess of 120 percent of all the manufacturing earnings and earnings in six industries were below 80 percent of the base. In other words, in 1948 of the 25 industries, 18 were in the range weekly earnings in all manufacturing ±20 percent; in 1966 only 13 were in this range. (If ± 10 percent of all the manufacturing earnings is used as the central group, in 1948, 12 of the 25 industries were in the range whereas in 1966 only 9 were.)

TABLE 10.—*Average weekly earnings as a ratio to average weekly earnings in manufacturing, 1948, 1953, and 1960–66*

Industry	1948	1953	1960	1961	1962	1963	1964	1965	1966
Mining	1.234	1.178	1.175	1.157	1.143	1.148	1.143	1.148	1.158
Contract construction	1.228	1.226	1.259	1.278	1.268	1.276	1.282	1.283	1.293
Manufacturing	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Durable Goods	1.060	1.087	1.086	1.086	1.268	1.089	1.089	1.092	1.084
Ordnance and accessories	1.078	1.108	1.208	1.224	1.207	1.208	1.187	1.218	1.209
Lumber and wood products	.896	.862	.821	.832	.820	.821	.827	.821	.825
Furniture and fixtures	.919	.893	.838	.827	.821	.821	.820	.816	.813
Stone, clay, and glass products	1.001	.995	1.031	1.031	1.020	1.026	1.024	1.023	1.018
Primary metal industries	1.151	1.198	1.221	1.243	1.240	1.251	1.262	.248	1.230
Fabricated metal products	1.060	1.085	1.096	1.092	1.085	1.084	1.081	1.083	1.084
Machinery	1.136	1.173	1.165	1.163	1.170	1.166	1.181	1.185	1.202
Electrical equipment	1.026	1.000	1.011	1.023	1.009	.995	.987	.986	.969
Transportation equipment	1.162	1.210	1.242	1.228	1.265	1.271	1.263	1.283	1.267
Instruments and related products	.989	1.030	1.040	1.049	1.033	1.019	1.006	1.007	1.010
Miscellaneous manufactures	.904	.873	.827	.821	.814	.806	.799	.792	.791
Nondurable Goods	.931	.887	.895	897	.889	.882	.882	.882	.877
Food and kindred products	.920	.901	.959	961	.951	.946	.943	.931	.925
Tobacco manufactures	.689	.675	.723	.751	739	.741	.738	.743	.758
Textile mill products	.822	.754	.708	.704	.706	.696	.712	.728	.731
Apparel and related products	.822	.691	.627	.628	.633	.626	.624	.620	.613
Paper and allied products	1.030	1.019	1.060	1.076	1.056	1.063	1.064	1.064	1.063
Printing and publishing	1.226	1.167	1.147	1.137	1.118	1.111	1.110	1.101	1.092
Chemicals and allied products	1.041	1.053	1.150	1.156	1.141	1.132	1.131	1.128	1.118
Petroleum and related products	1.304	1.282	1.322	1.346	1.314	1.322	1.298	1.290	1.288
Rubber and plastic products	1.004	1.031	1.031	1.041	1.036	1.011	1.018	1.021	.995
Leather and leather products	.773	.722	.674	.680	.669	.662	.669	.669	.667
Wholesale and retail trade	.827	.703	.788	.785	.777	.778	.721	.713	.704
Wholesale trade	1.009	.978	1.011	1.013	.996	.998	.996	.988	.990
Retail trade	.784	.705	.695	.693	.682	.682	.628	.620	.611

Not only has there been a marked thinning out of the middle of the range of weekly earnings by industry, but the minimum average weekly incomes as a ratio to the average has decreased. In 1948 only weekly earnings in Tobacco manufactures were below 70 percent of the average. In 1966 three industries exhibited weekly earnings lower than 70 percent of all manufacturing: these were Leather and leather goods, Apparel and related manufacturing, and Retail trade.

A surprising aspect of the developments in relative earnings over the post-World War II period deals with the change in relative earnings. Apparently the rich became richer and the poor poorer, over this period, at least among the industries examined. Of course, richer and poorer is in a relative sense.

Of the 10 industries with the highest relative earnings in 1948, 7 increased their relative earnings, 1 exhibited no serious change, and 2 (Mining and Printing and publishing) had substantial relative declines. In spite of their decline relative to all manufacturing during this period, earnings in Mining and Printing and publishing were at 116 and 109 percent, respectively, of the average for all manufacturing in 1966.

Of the eight industries with the lowest relative wages in 1948, seven experienced a substantial decline in their relative wages by 1966. The exception (Tobacco) had the lowest average weekly earnings in 1948 (69 percent of all the manufacturing average earnings). By 1966 this ratio was 76 percent, and Tobacco manufactures were fifth from the bottom in weekly earnings.

Some of the declines in relative earnings were really substantial. Earnings in Apparel fell from 82 to 61 percent of the average for all manufacturing, Furniture from 92 to 81 percent, Leather from 79 to 67 percent, Textiles from 82 to 73 percent, and Lumber fell from 90 to 83 percent. In addition, Retail trade fell from 78 to 61 percent and Miscellaneous manufactures from 90 to 79 percent.

The seven industries that ranked from 11th (Paper and allied products, relative earnings 103 percent), to 17th (Food, relative earnings 92 percent) in 1948 tended to show but slight changes in their relative earnings in the period to 1966. The relative earnings of Electrical equipment dropped 6 percent; all the others remained approximately unchanged in relative earnings, that is the terminal relative earning was ±3 percent of the initial relative earnings.

Thus over the period 1948–66 the rich tended to get richer, the poor poorer and those in the middle tended to hold their own.

The increase in the spread of relative earnings in the United States since 1948 seems to be due mainly to the relative retardation in the increase in earnings in what were already low wage industries. The relative retardation of two high earning industries in 1948 (Mining and Printing and publishing) are perhaps due mainly to technological changes, although the relative retardation of earnings in Mining is a part of today's rural poverty scene.

That Petroleum refining maintained its relative wages is also of minor interest. If we ignore Tobacco, Printing and publishing, Mining, and Petroleum, for the rest of the industries the change in the percentage points of relative earnings between 1948 and 1966 is highly correlated with relative earnings in 1948 (see table 11).

Many of the industries in which relative wages declined between 1948 and 1966 were sick industries for part or all of this period. In the case of the Textile, Apparel, Leather, and Furniture industries, one response to their difficulties was a rather large-scale migration of plants out of the major metropolitan centers and their historical areas toward small towns and the South.

A theorem seems to fall out of the experience of the postwar period. Marked declines in relative earnings in an industry will be accompanied by changes in the location of the plants in the industry.

If such migration in fact took place—and if it did go towards regions where large postwar outmigrations from agriculture were taking place—then three facets stand out:

(1) The cost of migration was less, being to a nearby industrial job rather than to a distant location. This lower cost tended to induce migration out of rural areas and to lower the retention rates of the urban centers.

TABLE 11.—*Relative earnings (1948) and change in relative earnings (1948–66) by industries*

Industry	1948 relative earnings[1]	Change in relative earnings, from 1948 to 1966
Contract construction	1.228	+.065
Transportation equipment	1.162	+.105
Primary metal industries	1.151	+.079
Machinery	1.136	+.066
Ordnance and accessories	1.076	+.133
Fabricated metal products	1.060	+.024
Chemical and allied products	1.041	+.077
Paper and allied products	1.030	+.033
Electrical equipment	1.026	−.057
Wholesale trade	1.009	−.019
Rubber and plastic products	1.004	−.009
Stone and quarry	1.001	+.017
Instruments and related products	.989	+.021
Food and kindred products	.920	+.005
Furniture and fixtures	.919	−.106
Miscellaneous manufactures	.904	−.113
Lumber and wood products	.896	−.071
Textile mill products	.822	−.091
Apparel and related products	.822	−.209
Retail trade	.784	−.173
Leather and leather products	.773	−.099

[1] Earnings in relation to Manufacturing, as given in table 10.

(2) The probability that the migrant exchanges rural and agricultural poverty for industrial and urban poverty or near poverty was greater than if the same number of jobs had been created in these industries in their old sites.

(3) In the absence of migration, employment in these industries would have declined in relative size. If appropriate effects to sustain demand and employment had been undertaken, then job openings in high wage industries would have been greater than observed.

From table 12 it seems apparent that whereas most of the spreading of the range of relative earnings—the rich getting richer and the poor poorer—took place between 1948 and 1960, the relative improvement in labor market conditions between 1960 and 1966 did not reverse the trend. If the range of relative weekly earnings is too broad, from a social policy view, then it may not be sufficient to rely upon aggregate demand generating policies to reverse the trend. Of course, during the 1961–66 period only a very half-hearted attempt was made to achieve full employment and it may be that a sustained period of tight full employment is needed to achieve a desired narrowing in the range of relative earnings.

The maintenance of the wide range of relative earnings is evidence that the supply curves of labor to the low relative wage industries remain highly elastic as the overall unemployment rate is decreased. This may reflect their locational advantages: with the continuing migration out of rural areas, the advantageously located low wage industries may in fact be operating with a high reservoir of labor, responsive to job opportunities at unchanging relative wages.

An additional point is worth noting. The 1960–66 period was the era of wage-price guidelines which stated "acceptable" wage increases as a percentage change: this type of wage increases would tend to stabilize the relative earnings patterns.

To summarize: It appears as if the range of relative weekly earnings increased over the postwar period. This increase may have been a response to the rising slack in the labor market that dominated the scene through 1960. The modest tightening of the labor market since that date has not reversed the widening of the range of relative earnings. Thus if the concern about poverty can be translated into a concern about relative earnings it may be necessary to supplement aggregative economic policies with policies designed to narrow the range of earnings from jobs.

Price Stability

In our discussion of price stability, we ignore the impact of rising prices upon the nonpoor. Price stability may affect the two classes of the poor—

TABLE 12.—*Relative earnings and ranking of relative earnings, 25 industries, 1948, 1960, and 1966*

Industry	Relative earnings			Rank of relative earnings		
	1948	1960	1966	1948	1960	1966
Petroleum and related products	1.304	1.322	1.288	1	1	2
Mining	1.234	1.175	1.158	2	6	7
Contract construction	1.228	1.259	1.293	3	2	1
Printing and publishing	1.266	1.147	1.092	4	9	9
Transportation equipment	1.162	1.242	1.267	5	3	3
Primary metal industries	1.151	1.222	1.230	6	4	4
Machinery	1.136	1.165	1.202	7	7	6
Ordnance and accessories	1.076	1.209	1.209	8	5	5
Fabricated metal products	1.060	1.096	1.084	9	10	10
Chemical and allied products	1.041	1.150	1.118	10	8	8
Paper and allied products	1.030	1.060	1.063	11	11	11
Electrical equipment	1.026	1.011	.969	12	15	16
Wholesale trade	1.009	1.011	.990	13	15	15
Rubber and plastic products	1.004	1.031	.995	14	13	14
Stone and quarry	1.001	1.031	1.018	15	13	12
Instruments and related products	.989	1.040	1.010	16	12	13
Food and kindred products	.920	.959	.925	17	17	17
Furniture and fixtures	.919	.838	.813	18	18	19
Miscellaneous manufactures	.904	.827	.791	19	19	20
Lumber and wood products	.896	.821	.825	20	20	18
Textile mill products	.822	.708	.731	21	22	22
Apparel and related products	.822	.627	.613	22	25	24
Retail trade	.784	.695	.611	23	23	25
Leather and leather products	.773	.674	.667	24	24	23
Tobacco manufactures	.689	.723	.758	25	21	21

those who actually or potentially receive income from jobs, and those who are mainly dependent on transfer payments—in quite different ways. To the extent that rising prices are a correlate of tighter labor market conditions, the improvement in job and income opportunities for the present unemployed and low wage employed is more than ample compensation to them for whatever hardships modestly rising prices bring. (Even the price rise of 1966 was modest by world standards.) For those who receive income by transfer payments, there is evidence that in the long run many of the transfer payments by right (social security, veterans pensions, etc.) keep up with price level increases. However, in the short run there is a lag which lowers the real income of these poor.

There is no evidence that the generosity of the public with respect to "case load" or discretionary transfer payments is such that a quick adjustment for price increases takes place. If such budgeted programs are not adjusted, once again some of the poorest are adversely affected by price level increases.

The casual or easy linking of price level increases to overall labor market tightening, however, is suspect. The price increase of 1966 was not a wage push inflation—in fact, for much of the labor force real wages went down—and it was not a delayed response to excessive wage increases earlier in the expansion. There was nothing in labor market conditions, as measured by overall unemployment rates, that made for a rapid run up in food prices during the year. Until the effects of special product and labor market circumstances are taken into account, too much weight should not be placed upon the price level increase of 1966 as an argument with respect to the relation between overall unemployment rates and prices.

From the perspective of the War on Poverty, some building of a consumers price level adjustment into social security and other payments (both by right and discretionary transfer) would be highly desirable. If this were done, then a portion of the adverse effect that modest inflationary pressures have upon the poor will be offset.

It is worth noting that the GNP price deflator has shown a tendency to rise from between 1.5 and 1.8 percent per year even with slack labor markets. At most the special rise in the deflator caused by the labor market tightening of 1966 was the difference between 3.3 percent and 1.5 or 1.8 percent. This is a modest price to pay for the reduction in the number of families living in poverty that has taken place in the expansion.

All in all, price stability is downgraded in importance from the perspective of a serious commitment to end poverty, especially if some price adjustments for transfer payment receivers can be regularized. However, to the extent that the War on Poverty is serious and the belief that income from jobs is preferable to a high level dole (even if it is called a negative income tax) then, if the relation between tight full employment and price level increases as stated in most empirical Phillips curves is valid, some serious experimentation with wage and price controls may be necessary.

Another aspect of the wage-price problem as related to the War on Poverty requires attention. Some inflationary pressure from wages on prices is good from the perspective of the War on Poverty. In the section on Size Distribution of Earnings it was pointed out that the range of relative earnings has widened since 1948 and that the expansion of 1961–66 has witnessed no perceptible reversal of the trend; if anything the trend has continued. Some pressure to push low wages up relative to high and average wages seems desirable. Such pressures could come from the market or, if necessary, from incomes policy. However, inasmuch as regular wage increases reflecting productivity increases are the now normal expectation for organized high wage workers, this required narrowing of the spread of relative wages can come about only if wages in the low wage industries increase faster than productivity. Thus the price of the product of low wage industries will need to rise, relative to other prices. Any price level increase because of this effect is an inherent part of any attempt to decrease poverty by way of employment.

As one of the low wage industries is retail trade, such a rise in prices may have a large impact on the consumers price index: the paths of consumer and wholesale prices will diverge. In addition, sectoral consumer price indices that are heavily weighted with low wage industries and occupations will rise relative to sectoral wholesale price indices where low wage industries are relatively important. Thus, for example, for the War on Poverty to be successful, automobile prices and wages should rise at a slower rate than textile and garment prices and wages.

Thus the addition of the War on Poverty to the set of policy goals downgrades the importance of price stability as a policy goal, especially if the rise in prices has a structure that reflects a "pushing up" of the present low wages.

Economic Growth

As Anderson has shown, economic growth by itself is not a very promising path for the quick reduction of poverty *(1)*. To the extent that low wages and near poverty incomes depend upon the absorption of the rural poor into an urban poor, a great deal of growth in income can take place without reducing the population in poverty. This is true to the extent that the urban poor contribute more to measured GNP than do the rural poor. Because of the chronic surplus of labor from the rural sections, the United States in part may be an enclave economy, similar to many underdeveloped economies. In an enclave economy, as long as the reservoir of rural poor is full, a great deal of progress without any substantial improvement in the lot of the poor can take place.

That is, the supply curve of low wage labor in the urban sectors is infinitely elastic at some markup over the going earnings of the rural poor. As long as the reservoir of rural poor is not empty, economic growth will take the form of shifting workers from being rural poor to being urban poor.

If the supply price of labor in the urban sectors results in a poverty or near poverty standard of life, then even though there may be measurable and significant improvements in life standards, all that has happened is that urban poverty has been substituted for rural poverty.

Tax policies have a shape as well as a size. Fiscal measures can be used to affect income distribution. To the extent that increasing the rate of growth is a serious policy objective, the shape of the tax program is affected. Tax measures, such as the investment tax credit, rapid depreciation, and even personal income tax adjustments favoring high income earners, receive favorable consideration under the heading of improving growth prospects. From the perspective of the War on Poverty, increasing personal income tax exemptions, lowering consumption taxes, and increasing transfer payments are desirable. It may be true that not much can be done by way of Federal tax changes directly to improve the lot of the poor. But much can be done indirectly if Federal income tax revenues can be used to support government expenditures that tend to equalize real income by furnishing to all income in kind and to substitute Federal Government financing for regressive State taxes.

From the perspective of the War on Poverty, economic growth as a policy objective takes on many of the attributes of a pie-in-the-sky promise. Nothing directly done to support growth will yield quick benefits to the poor. For example, if education and research are promoted to accelerate growth, the immediate impact of a rise in such expenditures will be an increased demand for the labor of the already affluent. Economic growth as an instrument to fight poverty has little virtue—it really is a "trickle down upon them" view of how to fight poverty. Thus, from this perspective, economic growth as a policy objective is downgraded, because all of the growth-inducing measures that are usually suggested, aside from tight full employment, have a perverse effect upon the relative well-being of the present poor.

On the other hand, economic growth is an attribute of the highly innovative American economy when it functions normally—and full employment does seem to emphasize the innovative aspects of the American economy. Thus, nothing need be done to especially induce growth if the economy is functioning at full employment. As full employment is upgraded as a policy goal with the War on Poverty, a byproduct of the war may be a more rapid growth in capacity GNP than has been achieved, without any special growth-inducing incentives.

Balance of Payments

Within any set of tariffs and other direct constraints on making dollars available to foreigners, the balance of payments acts as a constraint upon income. That is, within any structure affecting international trade and capital movements, there is a maximum level of income and rate of change of prices that is consistent with balance of payments equilibrium. If aggregate demand is too high for an extended period, a deficit will accumulate that will make it impossible for the United States to satisfy the commitment to pay gold.

From the perspective of the War on Poverty, the target aggregate demand needs to be high enough to generate and sustain a 3-percent unemployment rate. Such a rate initially may be accompanied by a somewhat more rapid increase in prices than we have averaged during 1964–65. These conditions, especially given the war in Vietnam, should lead to a larger deficit in the balance of payments than has been achieved in the past few years. Given the precarious gold position, even assuming the gold cover requirement is removed, such a movement toward tight full employment will cause difficulty in meeting the gold standard commitment.

Under these circumstances something will have to give way. The alternatives are: (1) to slacken on the aggregate demand target, (2) to change the structural elements which help determine imports and capital movements, and (3) to change the monetary rules. If the War on Poverty is serious, then alternative (1) is not available.

There really is little to choose between raising tariffs and tightening foreign capital movement constraints (withdrawing our troops from abroad is not taken as possible here) and changing the monetary rules. Whatever losses in efficiency that would result from constraining tariffs and capital movement regulations are not sufficient to compensate for the benefits of the higher GNP and the social benefits of tight full employment. Thus, a "liberal" presumption against interfering with free international trade becomes of secondary importance where the cost is a significantly lower aggregate demand. Certainly when it came to capital movements, "liberalism" was easily abandoned.

However, free international markets and aggregate demand unconstrained by balance of payments considerations are possible if the rules governing the international monetary system are changed. Basically this would mean abandoning the gold standard—which is a goal that has little domestic payoff.

From the perspective of the war on poverty, whether the abandonment of the gold standard takes the form of paper gold or freely fluctuating exchanges is not a matter of indifference. If the global amount of paper gold to be created is limited by some rule or determined by some central bank to central banks, there would still be some maximum aggregate demand consistent with the rules of the paper gold world. If this maximum is too low to achieve the target unemployment goals, then the price will be an abandonment of War on Poverty targets.

Freely fluctuating exchanges are consistent with the determination of aggregate demand by domestic employment needs. In order to make capital movements easier, and to promote the use of the dollar as an international currency, the Treasury for a fee should sell insurance compensating foreign owners of dollar balances for any increase of the GNP deflator by more than 1.5 percent per year.

That is, it seems, from the point of view of the War on Poverty, that the objective of balance of payments equilibrium is downgraded. A free product and capital market plus fluctuating exchanges seem marginally better than stricter import controls plus capital movement controls and fixed exchanges.

Summary on Policy Trade Offs

The effect of adding the elimination of poverty to the objectives of economic policy is to increase the weight attached to full employment as a goal. If, in the absence of the commitment to end poverty, a particular trade off existed now between full employment and some combination of price level increases and balance of payment position, with the addition of this new objective, tighter full employment at the expense of more rapid price level increases and a deteriorated balance of payments position is acceptable.

Aside from directly helping those in poverty who acquire jobs as a result of tighter full employment, tighter full employment aids in the War on Poverty by raising State and local tax revenues and decreasing welfare rolls. Both of the above will enable the relevant governments to either improve income in kind or raise welfare payments.

In addition, excess demand conditions over a broad spectrum of jobs will aid in upgrading workers. Workers presently in low-paying jobs can move up the occupational ladder. Fulsome job opportunities will help generate additional families with more than one income earner. This can lift families well above the minimum poverty line.

The existence of excess demand for workers in better paying jobs should, if no infinitely large reservoir of very low income people existed, raise wages and weekly earnings in the presently low-paying jobs faster than wages in general rise. However, as long as the huge reservoir of potential migrants from rural America is full, the upward wage pressure on the present low wage occupations may not take place. Thus there may be a need for special programs to affect relative wages.

In order to validate past decisions to invest and for technical progress not to force unacceptable losses upon the owners of inherited capital, which in a progressive society embody techniques that are no longer best usages, aggregate demand must grow. As long as aggregate demand grows, technical dynamism and large-scale gross investment, such as takes place at full employment, guarantee that productive capacity will grow. That is, adequate aggregate demand, defined as demand sufficient to generate tight full employment, is necessary both to validate past growth-generating behavior and to insure present behavior conducive to growth. Thus, economic growth is a byproduct of a full employment policy. In fact, the flaw in capitalism discussed in the next section centers around the runaway behavior of the propensity to invest if full employment is sustained over an extended period of time.

To the extent that corporate gross profits provide a large share of the financing for gross investment and that households which receive appreciable incomes from property tend to save a large portion of their income, a concern about increasing the growth rate indicates that moves to decrease the share of gross profits after taxes in gross national product are out of order. Thus, attaching significance to growth as a policy goal will not conflict with the War on Poverty as far as the size and rate of change of aggregate demand is concerned. It may conflict with the goal to eliminate poverty with respect to income distribution.

The income distribution goals of the War on Poverty center around three items: (1) raising low wages relative to high wages, (2) larger transfer payments to those not in or not expected to be in the labor force, and (3) elimination of taxes that fall most heavily on the poor.

The weight attached to growth as a policy objective will not necessarily affect the objective of raising low wages relative to high wages. The greater the weight attached to growth the greater the desire to ease taxes in general and profit taxation in particular. Thus there may be a conflict between goals relative to transfer payments and taxes.

That is, inducing growth may conflict with the War on Poverty in terms of the desired structure of the tax system.

The Flaw in American Capitalism

American capitalism is flawed. However, the major flaw may not be that encompassed by the Phillips curve analysis, which entertains the possibility that satisfactory unemployment levels are associated with unsatisfactory rates of increase of prices. Satisfactory, of course, means consistent with the achievement of specified social goals whether they be ethical or pragmatic. From the perspective of this paper, satisfactory means rapid progress toward the elimination of poverty. There is nothing in our experience through 1966 that proves that a balanced growth of aggregate demand relative to productive capacity when there is slack in the labor force, as measured by an excess of unemployment over tight full employment, will lead to rapid price increases. We have not had sufficient experience with the growth of aggregate demand at the same rate as capacity with tight or even slack full employment to venture a good guess as to how prices behave under those circumstances. What we have observed is that unbalanced growth of aggregate demand, which requires a shuffling of resources among sectors, combined with frequent changes in the way demand is unbalanced, which requires reshuffling of resources, leads to an increase in the rate of increase of prices.

To the extent that there is such a Phillips curve problem, even radical structural changes are consistent with the essential nature of American capitalism. Certainly the labor market policies adopted to date, which may or may not turn out to shift the Phillips curve in the appropriate direction, have not changed anything essential.

The flaw in American capitalism centers around the financial system, and the financial system is an essential attribute of the economy. American capitalism is an intensely financial system. The relative free entry into industry, the rapid changes in industrial structure, and the emphasis upon innovations are all in part due to, and are reflected in, the financial structure.

In a private financial system, the portfolios of households, business firms, and financial organizations all reflect speculations as to the future prospects for the economy. Some of the available menu of assets offer income in kind in the form of safety, other assets require the owners to take a full measure of the uncertainty that is inherent in the performance of a decentralized economy which historically has been subject to quite severe business cycles. When the prospects of the economy look very good, as they did, for example, at the end of the soaring year of 1965, all portfolio holders shift from preferring portfolio assets with "protective" features to portfolio assets that are expected to prosper from the now taken-for-granted prosperity.

For business firms—as well as for households (but this is not essential)—portfolio assets include real capital. In times of assured prosperity, portfolio preferences of business shift in such a way that large additions to their real capital stock is desired. Over 1964, 1965, and much of 1966 the American economy acted as if it were starved for capital. Investment in each of these years increased at a nonsustainable rate. An enterprise economy of this type might be characterized as "euphoric."

The essential flaw in American capitalism is this propensity for business investment to take off into a cumulative, nonsustainable explosion. The trigger to this explosion is a past of very good times which leads to a general reevaluation of business prospects.

The War on Poverty requires that tight full employment be achieved and sustained. But once it is certain that tight full employment will be sustained, then all enterprises would suddenly find they want much more capital than they have. Given the certainty of tight full employment, the gross profits of the firm are assured. Under these circumstances, managers will be very willing to finance the acquisition of new capital by emitting liabilities which, in a world where uncertainty loomed larger, they would never tolerate.

However, it is not only new investment that is affected by such emphasis. The investment decisions of the past leave a financial residue. These instruments carry yields that reflect the views about the relative riskiness of the different ventures and financial assets at the time they (the instruments) were emitted. These assets now have to be priced to reflect current views about expectations. The security that safe assets offered is now, in a world where uncertainty has been attenuated by the guarantee that prosperity will be sustained, of little value compared to the higher income offered by assets whose owners take their chances on the performance of the economy. The price of very safe assets falls; the price of risky assets rises.

The pressure on interest rates comes from two sources. One is the desire to invest larger and larger shares of total output. The second is the change in the desired asset structure by ultimates and intermediaries as a result of the new view about the future of the economy.

The end result of such an investment boom is a large-scale decrease in liquidity. Even in the absence of Federal Reserve constraint, but as long as the Federal Reserve does not turn into an engine of runaway inflation, the end result of the ever greater pinch in liquidity will be a financial tremor or crisis. The financial crisis forces a revaluation of desired assets and liabilities—including the desired stock of capital. The breaking of the investment boom can lead to a reciprocating set of feedbacks between income and financial sectors that ends in a deep depression, unless large-scale fiscal stimulants are undertaken.

Thus the sustained tight full employment that is required for the War on Poverty to succeed may be impossible to achieve with the financial system of American capitalism.

Notes on a Program Against Poverty

The conclusion of the preceding section is pretty dismal, fitting for an essay rooted in the dismal science. We are of necessity working with an economic system that is not perfect. We therefore should expect that any program aimed at some proximate policy goal, such as sustained tight full employment, will have side effects that adversely affect not only other dimensions of the system but also the ability to attain the proximate policy goal. Sustained tight full employment will set up a euphoric situation that may set in motion balance sheet adjustments that may tend to tear the very fabric of the financial system to shreds. If 1966 is evidence of anything, it is evidence that the economy has difficulty in assimilating a sustained expansion, let alone sustained full employment.

I will not venture into the morass of a program to reform the financial system so that it no longer is inconsistent with tight full employment. A planning constraint, such as investment licensing, and a constraint on using the financial market (capital issues licensing) might dampen the enthusiastic response. However, these direct controls on the runaway tendency to invest will fundamentally change the nature of the economy.

I also do not believe that the problem of 1966 was due to too much fiscal ease, so that monetary policy had to do too much of the job. This conventionally wise diagnosis of what happened in 1966 assumes that the sustained expansion of 1961–65 plus the guarantee by authorities that this progress could be sustained indefinitely had nothing to do with the pressure on financial markets.

The ingredients for a correct aggregate economic policy exist in the experience of the last three quarters (third and fourth quarters of 1966 and first quarter of 1967). A financial system tremor occurred which by itself would have resulted in a deep and fairly long depression in investment. The impact of the leveling off and decline in private investment was offset by a large increase in government spending. The net result has been stable unemployment levels and no decline in aggregate demand. True, the radical shift in the composition of demand has brought with it pressure on prices, but that is a small cost for the real output that was not lost.

What we need is a fiscal equivalent to an escalating war whenever runaway propensities to invest via financial repercussions lead to financial distress and instability. The financial difficulties are an essential part of the mechanism; the policy problem is to prevent the financial system problems from generating significant downward pressure on resource use.

If the government acts as a true employer of last resort, with reserve employment programs in being at all locations where unemployment can conceivably be a problem, then government expenditures will respond by increasing rapidly whenever unemployment becomes a reality. To date the automatic fiscal stabilizers act mainly on the tax receipts side; by employer-of-last-resort programs they will also act on the expenditure side.

It has been argued that the expansion to date (end of 1966) has not had the effect of rectifying the broadening of relative wages that has occurred since 1948 and that special measures may be needed. An obvious measure would be to gradually increase the ratio of the wage at which employer-of-last-resort jobs are available to the average wage—i.e., decrease the range between the statutory minimum and the average hourly wage, and guarantee jobs to all at the statutory minimum. It may be that policies which restrict wages above the average to a maximum increase of some 3 percent per year while the minimum wage rises by some 5 percent per year will be an important weapon in rectifying the wage structure. Continuing this program of differential rates of increase for a number of years will lead to a ratio of minimum to average of 80 percent rather than perpetuating the present more extended range.

If such pressure upon low wages results in unemployment in the private sector, the public employment sector needs to fill up the breach.

There are no shortages of useful and important jobs that such an employer of last resort can undertake; all that is needed to get a list of such jobs is to ask any mayor, or county supervisor, or school board head.

The employer of last resort should have a youth employment arm. By a combination of school years and vacation jobs, all youngsters in school 14 years old or over, male and female, should be guaranteed a minimum of $600 per year for 14-year-olds (rising to $900 per year for 18-year-olds). College student guaranteed employment should be geared to college room and board rates.

Under all circumstances youth income should be included as taxable income of the head of the household.

For youths who choose to drop out of formal schooling, the youth arm of the employer authority should provide both full-time employment and job training programs combined with part-time employment.

There are two aspects of the transfer payment programs that require marked revision. Many of the programs now in effect were introduced during the 1930's, a period of chronic mass unemployment. They were designed in good part to reduce the size of the labor force. There is nothing sacred about the existing retirement ages or the school-leaving ages. Of immediate issue is the adequacy of social security. Options should be available for a worker to delay retirement in exchange for larger benefits upon retirement. The ceilings on earnings while receiving full benefits should be revised to allow for regular part-time employment or seasonal full-time employment. Participation in the labor force of the healthy and alert aged should be at their option—aggregate demand policy should be relied upon to generate the requisite number of jobs.

Much is being said about a negative income tax as a means of supplementing the earned income of those who earn too little and as a substitute for welfare payments for those not in the labor market. If the negative income tax is really to aid those with low incomes, the marginal tax rates on income earners will of necessity be high. Thus it will have a large disincentive component.

A simple alternative to a negative income tax is a children's allowance. Recent computations indicate that many families are in poverty because of family size and the cost of maintaining their larger families. These computations indicate that the "cost" of an additional child is from $600 to $750 per year. A family allowance of $25 per month per child under 14 would cost about $16 billion per year gross. If the receipts from the family allowance are considered a part of taxable income, then the net cost would be somewhat lower—say $14 billion. Thus the cost of a family allowance would be some 2 years' fiscal drag at present income and tax rates.

The virtue of a family allowance is that the Federal checks will go to all—rich and poor, Negro and white, alike. There will not be any preponderance of receivers over payers for any particular social, ethnic, or other class. As it will be a part of the tax base, the subsidy to the poor will be greater than to the well to do.

The defect of the children's allowance is that it will still leave some room for "case work" welfare. However, by belonging to each child by right it also will not have any disincentive effects with regard to labor market participation by parents.

The ability to eliminate poverty depends not only upon the growth of potential GNP but also upon a higher ratio of actual to potential GNP than we have achieved to date. The maximization of aggregate demand, and thus of income from jobs, is the quickest way to constrain poverty.

The elimination of poverty is more than a minimum income goal. More deeply it is an attempt to foster the integration of the present poor and their descendants into society. This means that income from what is considered useful work is the main way to achieve the antipoverty goals. But this, in turn, requires that we invent new types of jobs—and it is the function of the employer of last resort to define new jobs which are available not only to the present poor who are now in the labor force but also to many of the present poor who, because of the peculiar nature of our income maintenance policies, are not now in the labor force.

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Chapter 32

Negative Income Taxation as a Method of Income Maintenance

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The War on Poverty has naturally stimulated interest in how well public programs aid low income people. One result of this increased interest is greater knowledge of both the strengths and the limitations of existing programs. Another result is interest in new kinds of income transfer proposals such as family allowances and a guaranteed minimum income. In this paper I have investigated one method of guaranteeing a minimum income: negative income taxation. The first section of the paper describes several negative income tax plans. The second section presents estimates, for 1961, of how well the system of public income transfers met the needs of low income families in rural and urban areas. The third section looks at negative income taxation as an alternative to some existing programs and then examines alternatives to negative income taxes. The fourth section describes the factors determining the cost of a negative income tax plan and then provides some estimates of the costs of representative plans. The fifth section briefly summarizes the main findings.

Negative Income Tax Plans

Negative income taxation is a method for transferring income to low income families or persons. In the last few years there have been several proposals to use the income tax system as a means of improving family income security. There are two basic versions of these negative income tax proposals. One version begins by establishing a break-even level of income (the level of income at which negative taxes are reduced to zero) and a schedule of negative tax rates. Actual negative income tax proposals have adopted a tax filer's exemptions and standard deductions or a family's poverty line as break even levels. Tax filing units or families whose income is below these levels would be eligible to receive negative income tax allowances. If the exemptions-deductions approach is followed, a taxpayer whose income makes him eligible for allowances would receive payments on an annual basis equal to some percentage (this percentage is equivalent to the negative tax rate(s)) of his unused exemptions and deductions. If poverty lines are adopted, a poor family would be eligible to receive negative income tax payments equal to some percentage of its "poverty income gap," i.e., the gap between its income and the income it needs in order not to be poor.[1] The poverty line approach has the advantage of confining, at least in principle, negative income tax payments to persons or families defined as poor. The exemption and deduction approach has the advantage that it ties in more closely with the definitions and concepts of existing income tax law.

The other version of negative income taxation begins by specifying some level of basic allowance for which each member of a family is eligible. A tax schedule is then specified which indicates the amount by which the basic allowance is reduced for each dollar of other income. This version of the negative income tax is similar to a proposal entitling income tax filers and their dependents to a tax credit in lieu of personal income tax exemptions. One proposal, advanced by James Tobin, consists of a basic allowance of $400 for each taxpayer who substitutes the Tobin income tax schedule for the present income tax schedule and income tax exemptions (*16, 17*).[2] Tobin adopts a tax schedule with a single 33⅓-percent rate and merges his plan with the present income tax system by providing that the 33⅓-percent tax rate applies only up to the income level at which the taxpayer's tax liability under the Tobin plan equals the taxpayer's tax liability if he adopted the present income tax schedule. Above this income level taxpayers will minimize their tax liability by adopting the present tax schedule. Tobin's plan thus assures that no taxpayer will pay more taxes than he pays at present (unless, of course, his income increases). However, the Tobin plan, like the first version negative income tax plans, leaves open the question of how the payments will be financed.[3]

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[1] A more extensive description and discussion of negative income taxation may be found in Green (*7, ch. 4*) and in Green and Lampman (*8*). (Italic numbers in parentheses indicate references listed at the end of this paper.)

[2] Tobin would exclude the aged from the plan and assure all of the aged a comparable guaranteed minimum income under social security.

A variant of the second version negative income tax plans is a proposal advanced by Rolph (*12*). Rolph would replace all personal income tax exemptions and some deductions with a $400 tax credit for each dependent claimed on the income tax return. If a taxpayer's gross tax liability[4] exceeds the total value of the tax credits he is allowed, he would pay taxes equal to the difference between the tax liability and the credits. If the tax liability is less than the tax credits, then the taxpayer would receive payments from the government equal to the deficiency. Rolph explicitly builds a self-financing mechanism into his proposal by advocating a proportional income tax schedule (to replace the present progressive income tax schedule) with a tax rate high enough to finance both the tax credit plan and other government expenditures normally financed by individual income tax revenues.[5]

Rolph's tax credit version of negative income taxation and negative income taxation, in general, have much in common with what, elsewhere, I have termed "social dividend taxation." Under social dividend schemes all families, rich and poor alike, would receive periodic payments which, on an annual basis, would amount to a guarantee of a poverty-free minimum income.[6] The very heavy cost of social dividend schemes is met by a tax levied on all income, and the level of the tax rate(s) determines the "net cost," i.e., the amount of income that is redistributed by the plan.[7]

Negative Income Taxation as Income Maintenance

Negative income taxation focuses upon reducing the poverty income gap, which presently amounts to about $11 billion.[8] It does so by adopting an income test in determining eligibility for receiving negative income tax allowances. Thus a central feature of negative income taxation is that the benefits are income-conditioned. A family's income, in relation to its size, determines the family's eligibility for and the level of the payment it may receive. Negative income taxation represents one form of income maintenance and stands in some contrast to other types of income maintenance.[9] The contrast arises not only out of a difference in methods of transferring income (a negative income tax is unique in its use of the tax system as a direct income transfer device) but is explicable in terms of the conditions for eligibility to receive transfers.

The major components of the present public income maintenance system are: (1) social insurance, which includes old age, survivor, disability, and health insurance (OASDHI), and unemployment compensation (UC); (2) public assistance; and (3) veteran's pensions and compensation. None of these programs transfers income on a universal basis, i.e., makes need, as measured by, say, income the only eligibility condition for receiving payments. The social insurances partially replace the income loss usually experienced by the aged and the involuntarily unemployed. While age and unemployment are often causes of poverty they are by no means the only ones. In some contrast to the social insurances are the categorical public assistance programs. They make assistance payments which are designed to supplement the meager income or other resources, if any, of families who lack an able-bodied earner.[10] At any one time only about a quarter of the poor population receives public assistance. Although one cause of poverty—which is partially ameliorated by the public assistance programs—is lack of an able-bodied earner, it is certainly not the only cause of poverty. Finally, benefits under the veterans' programs are based on status as a veteran which obviously makes the programs less than universal.

In addition to the programs which are supposed to maintain family income by means of cash transfer, there are programs which are supposed to maintain income security by means of higher prices. Minimum wage legislation and agricultural commodity price supports are examples. These are not ordinarily included among our income maintenance programs. In contrast to negative income taxation, minimum wages and price supports are dubious antipoverty measures because they are unlikely to help those persons whose poverty arises out of their low productivity.

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[3] The natural growth of revenues due to the income elasticity of personal and corporate income taxes could be used to finance part of the costs of negative income tax plans.

[4] Gross tax liability is found by applying the income tax schedule against the taxpayer's income.

[5] Rolph (*12, pp. 161–162*) estimates the tax rate would need to be 25 to 30 percent.

[6] Green (*7, ch. 4*). The idea of a "social dividend" is traceable back to the writings of the Englishwoman, Lady Rhys-Williams, during the 1940's (including *13*; *14, esp. pp. 121–137*).

[7] The "gross cost" of a plan providing 48 million families with an average of $3,000 apiece and 12 million unrelated individuals with $1,500 apiece is about $160 billion.

[8] Using Census Current Population Survey data for 1965 I estimate the poverty income gap at $11.4 billion. I did not make any downward adjustment for the lower poverty thresholds of farm families.

[9] "Income maintenance" appears to be a popular label for those social welfare programs which directly transfer income to persons and families.

[10] The categorical programs which are administered locally, but are financed in part by Federal revenues, include: old age assistance (OAA), aid to families with dependent children (AFDC), aid to the blind (AB), and aid to the permanently and totally disabled (APTD). In addition, there is general assistance (GA) which is financed completely by the States and localities and which makes assistance available (in those States which have a GA program) to indigent persons in general. However, at any one time there are only about 650,000 recipients (in 300,000 "cases") of GA. Also some States have an AFDC-UP program which allows families with an unemployed parent (father) to receive aid to dependent children.

Data Base for Estimating Distribution of Income Transfers

One way in which to evaluate a negative income tax plan is to examine what the existing system of income transfers do for the poor. Unfortunately, there are no very recent data indicating the distribution of various types of transfers to the poor and nonpoor.[11] Thus I have had to draw on data from special tabulations of the Survey of Consumer Expenditures, 1960–61.[12] Estimates based on these data understate what presently is done for the poor. First, this is 1967 and the data are for 1961. Since 1961 there have been some improvements in the level of OASDHI benefits and in some States in the level of public assistance payments.[13] Second, the BLS data do not include nonmonetary transfers such as the value of surplus food and medical services. Third, the BLS survey, like any survey of income, understates the income received by families. For example, the BLS data indicate $2.6 billion and $2.7 billion in public assistance and in unemployment compensation payments respectively. However, the Social Security Administration (SSA) reports that in 1961, public assistance payments amounted to $4.1 billion and unemployment compensation to $4.0 billion.[14]

Estimates based on the BLS data must be used with some care. Income information was obtained for 1960 and 1961 from a total of 13,728 consumer units. The relevant sample size is, however, smaller when breakdowns are made by urban-rural and by rural nonfarm-rural farm groupings. This means that when one is looking at the average amount of a particular transfer payment received by one of the six sizes of families for which information is available in one of the 10 income brackets used by the BLS, he may be looking at a mean based on very few actual observations. To the extent that this is the case, the standard errors of some of the individually estimated means may be large.

The estimates I have made in this paper are not fully comparable with the estimates I made in *Negative Taxes and the Poverty Problem* (7). There I made no adjustment in the poverty lines for farm operators. Here I have made an adjustment which is shown in table 1. The poverty lines used in this paper for the urban and rural nonfarm population are the same as the ones that I have used elsewhere. The poverty lines for the farm population are 70 percent of the urban and rural nonfarm lines. In this paper, in calculating the number of poor families in the divided income brackets, I used a method of nonlinear interpolation. In my earlier work I used a linear interpolation method. In calculating amounts of income in the divided income brackets I used judgment in both this paper and in my earlier work.

TABLE 1.—*Poverty lines adopted in this paper*

Size of family	Urban-rural nonfarm [1]	Rural farm [2]
1	$1,500	$1,050
2	2,000	1,400
3	2,500	1,750
4	3,000	2,100
5	3,500	2,450
6 or more [3]	4,500	3,150

[1] Roughly the same as the poverty lines adopted by the Social Security Administration [Orshansky (*11*)].

[2] 70 percent of the urban-rural nonfarm poverty lines.

[3] Assumes an average family size of seven.

The Incidence of Poverty and Its Reduction by Transfer Payments

In 1961, how many families were taken out of poverty by income transfers? To make the estimates it was necessary to use adjusted gross income (AGI) as a proxy for before-transfer or factor income. The number of families who were poor on the basis of AGI could then be compared with the number of families who were counted as poor on the basis of total money income (TMI).[15] Table 2, column 1, shows that in 1961, 23.8 percent of all consumer units were counted as poor before receiving transfer income. The after-transfer poor (who correspond to "the poor" as we ordinarily use that term) made up 15.2 percent of all consumer units.[16] Thirty-six percent of the before-transfer poor were pulled out of poverty upon the receipt of transfer income.

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[11] Relevant data from the Survey of Economic Opportunity, taken by the Bureau of the Census for the Office of Economic Opportunity, had not been released at the time of the preparation of this paper.

[12] U.S. Treasury Department, Office of Tax Analysis, special tabulations of the Survey of Consumer Expenditures, 1960–61, of the Bureau of Labor Statistics. The Office of Tax Analysis was kind enough to make the tabulations available to the National Advisory Commission on Rural Poverty.

[13] For example, total public monetary transfer payments amounted to $40.8 billion in fiscal year 1966 compared with $29.4 billion in fiscal year 1961. U.S. Department of Health, Education, and Welfare, *Social Security Bul.*, Vol. 29, October 1966, p. 2.

[14] Part of, but not all of, the difference can be explained by the inclusion in the SSA figures, but not in the BLS figures, of administrative expenses and vendor medical payments in public assistance and expenses of the U.S. Employment Service in unemployment compensation.

[15] The special tabulations, based on the BLS survey, produced estimates of income and numbers of families by family size and by both money income and AGI classes.

[16] The basic income-expenditure unit in the BLS survey is the "reconstructed economic family." It consists of persons dependent upon a pooled income for major items of expense and usually living in the same household. In contrast, the Bureau of the Census defines families as units of two or more individuals related by blood, marriage, or adoption, and residing together. "Unrelated individuals," according to the Census definition, are persons who are not living with any relatives.

Table 2 indicates that in 1961 the incidence of poverty in rural areas was substantially higher than it was in urban areas (see columns 4 and 5). On a before-transfer basis 33.4 percent of rural families were poor compared to 20.2 of urban families.[17] On an after-transfer basis the percentage of rural families who were poor was more than double the percentage of urban families who were poor—24.3 and 11.7 percent, respectively. Transfers pulled 41.8 percent of urban families out of poverty compared to 27.3 percent of rural families who were poor before receiving transfers but not poor after receiving transfers.

Table 2 also allows a comparison between rural farm and rural nonfarm families. It indicates that the incidence of poverty among farm operators was not as great as the incidence among rural nonfarm consumer units. Just why this is so is not clear. Perhaps the lower poverty lines for farm operators overstate the real differences in money income needed by rural nonfarm and rural farm families.

Table 3 tells us something about the percentage of families, urban and rural, who received public transfer income in 1961.[18] Table 3 show that rural farm families were less likely to receive public transfer income than were nonfarm (urban and rural) families. This is especially the case when we look in rows 2 and 3 at the percentage of before- and after-transfer poor families who received some form of public transfer income. Overall, at least 62 percent and perhaps as much as 89 percent of the before-transfer poor are reported as receiving some transfer income in 1961 (see row 2). The rural nonfarm and urban figures are more or less the same as the combined rural-urban figure. However, a maximum of 56 percent and a minimum of 40 percent of the before-transfer rural farm poor received transfer income in 1961. The same result appears when we turn to row 3 and the after-transfer poor. Rural farm families again fare worse than their nonfarm counterparts.

Transfer Income Received by the Poor

What percentage of total transfer payments were received by poor families? Table 4 presents some estimates, again with a rural-urban breakdown. In the top half of table 4 are estimates which exclude interfamily cash gifts; the bottom half of the table includes cash gifts in the definition of transfer income. Perhaps from the point of view of public policy the top half of table 4 merits more attention. This half shows that the before-transfer poor received 53 percent of all public transfer income. The nonpoor received 47 percent of public transfer income. The after-transfer poor families received less than a quarter of total transfer income received by families. Between a quarter and a third (29.5 percent) of transfer income pulls otherwise poor families out of poverty.

Interestingly, the shares of the urban poor and rural farm poor in total transfers made to urban

TABLE 2.—*Incidence of poverty and its reduction by income transfers, 1961* [1]

Type of family	All families urban and rural	Rural nonfarm	Rural farm	All rural	Urban
(1) Before-transfer poor as a percentage of all families	23.8	34.9	28.4	33.4	20.2
(2) After-transfer poor as a percentage of all families	15.2	25.6	19.9	24.3	11.7
(3) Percentage reduction in poor families	36.2	26.7	29.7	27.3	41.8

Source: Data from U.S. Department of the Treasury, Office of Tax Analysis, based on the special tabulations of the Survey of Consumer Expenditures 1960–61, of the Bureau of Labor Statistics, U.S. Department of Labor.

[1] Income transfers include interfamily cash gifts. Table 2 is a composite of some estimates in tables 7 through 11 in appendix A.

TABLE 3.—*Percentage of families receiving transfer income, 1961* [1]

Type of family	All families (rural and urban)	Rural non-farm	Rural farm	Total rural	Urban
(1) All families receiving transfers	32.0–43.1	36.4–49.4	24.3–32.9	33.6–45.6	31.4–42.1
(2) Before-transfer poor	62.1–89.0	60.0–85.3	40.0–56.1	56.1–79.7	65.8–94.7
(3) After-transfer poor	50.7–75.5	50.1–73.0	25.1–35.6	45.4–66.0	54.9–83.1

[1] Interfamily cash gifts not included in transfer income. Table 3 is a composite of some estimates in tables 12 through 16 in appendix A.

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[17] A χ^2 test was used to test the hypothesis that the individual sample means were significantly different from the overall mean. The χ^2 value was significant at more than the .001 level. Perhaps part of the explanation is that, on the average, there is a lower cost of living in rural areas than there is in urban areas.

[18] The figures are in ranges of totals because the BLS data does not give the number of families receiving some form of transfer income. Rather it gives the number of families receiving broad classes of transfers such as: (1) public benefits and pensions, which include OASDI, other public and private pensions (received mainly by government employees), unemployment compensation, and workmen's compensation; (2) public assistance and private nonfamily assistance, and (3) veterans' pensions and compensation. Some families may have received more than one type of transfer payment.

TABLE 4.—*Percentage of transfer income received by the poor, 1961* [1]

Type of family	All families urban and rural	Rural non-farm	Rural farm	Total rural	Urban
Percentage of total public transfers received by: [2]					
(1) Before-transfer poor families	53.1	64.4	52.5	62.5	49.6
(2) After-transfer poor families	23.6	33.5	17.3	40.9	20.9
(3) Families made nonpoor by transfer	29.5	30.9	35.2	31.6	28.7
Percentage of transfers received by the before-transfer poor which contributed to making them nonpoor (3) ÷ (1)	55.5	48.0	67.0	50.5	58.8
Percentage of total public transfers and inter-family gifts received by:					
(1) Before-transfer poor families	50.7	63.7	50.5	61.7	46.8
(2) After-transfer poor families	22.5	32.8	17.1	30.4	19.7
(3) Families made nonpoor by transfers	28.2	30.9	33.4	31.3	27.1
Percentage of transfers received by the before-transfer poor which contributed to making them nonpoor (3) ÷ (1)	55.6	48.5	67.0	50.7	58.0

[1] Table 4 is a composite of some estimates in tables 17 through 21 in appendix A.

[2] Includes private institutional assistance to persons (e.g. church charity) because the BLS figures lump public and private assistance together, but excludes inter-family cash gifts.

and rural farm families, respectively, do not differ very much. However, the shares received by the rural nonfarm poor are higher. Almost two-thirds of the transfers to rural nonfarm families were received by the before-transfer poor and a third by the after-transfer poor.

The percentage of total transfer payments which helped pull families above their poverty lines ranged from 35.2 percent for the rural farm group to 28.7 percent for the urban group. The percentage of transfers received by before-transfer poor families which contributed to making them nonpoor ranged from 48 percent for the rural nonfarm group to 67 percent for the rural farm group. There does not seem to be any obvious explanation for these differences.

What kinds of transfers were received by the poor? Table 5 contains estimates of the percentage of transfer income from the major income maintenance programs which was paid to poor families. Table 5 indicates that per dollar of payment the public assistance programs do the "most" for the poor. Over 90 percent of public assistance payments were received by the before-transfer poor. A little over three-fifths of OASDI payments were received by the before-transfer poor, but OASDI is more helpful than is public assistance in pulling before-transfer poor families out of poverty (see rows 3, 6, and 9). Less than half of veterans' payments and only a little over a third of unemployment compensation was received by before-transfer poor families. In each case the percentages are somewhat higher for the rural poor than they are for the urban poor.[19] For the after-transfer poor public assistance was again the most important source of antipoverty

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[19] Breakdowns for the rural nonfarm and rural farm groups may be found in tables 18 and 19, appendix A.

TABLE 5.—*Percentage of total transfer income from major programs received by the poor, 1961* [1]

Type of family	OASDI	Unemployment compensation	Public assistance	Veterans' pensions and compensation	Total transfers
Urban and rural:					
(1) Before-transfer poor families	62.3	35.6	92.4	44.9	53.1
(2) After-transfer poor families	23.2	15.5	67.3	10.4	23.6
(3) Families made nonpoor by transfers	39.1	20.1	25.0	34.5	29.5
Rural:					
(4) Before-transfer poor families	69.8	42.7	92.7	57.7	62.5
(5) After-transfer poor families	31.4	20.3	75.4	17.5	30.9
(6) Families made nonpoor by transfers	38.4	22.4	17.4	40.2	31.6
Urban:					
(7) Before-transfer poor families	59.4	33.1	92.3	38.5	49.6
(8) After-transfer poor families	20.1	13.8	64.6	6.9	20.9
(9) Families made nonpoor by transfers	39.3	19.2	27.6	31.6	28.7

[1] Table 5 is a composite of estimates in lines 6, 7, and 8 of tables 17, 20, and 21, appendix A.

transfer income from the standpoint of the percentage of each dollar expended on the poor. About two-thirds of all public assistance payments were received by the after-transfer poor, while less than a quarter of OASDI payments and less than a sixth of UC and veterans' payments were received by the after-transfer poor.[20]

While public assistance is, per dollar expended, the most important income transfer program meeting the needs of the poor, OASDI is the most important income transfer program from the standpoint of the number of dollars received by poor persons and families. Table 6 indicates that over half of all public transfer income received by the before-transfer poor, both rural and urban, is in the form of OASDI benefits. OASDI is also the most important program contributing to keeping otherwise poor families out of poverty (see lines 3, 6 and 9). Less than 20 percent of transfer income received by the before-transfer poor was in the form of public assistance. The importance of public assistance increases somewhat when we turn to the after-transfer poor, but even here OASDI payments make up approximately half of the transfer income received by the poor. Table 6 indicates that public assistance is somewhat more important in urban areas than it is in rural areas.

Negative Income Taxation as a Substitute for Existing Programs

Negative income taxation is conceived both as a substitute for and a supplement to the present array of social welfare programs. For example, negative income tax allowances might reduce the importance of the income security function of, and therefore the justification for, minimum wage legislation and agricultural commodity price supports. Public assistance could be substantially reduced, if not eliminated, if a negative income tax plan were adopted. Table 5 showed that about **90** percent of all public assistance was received by before-transfer poor families. If a negative income tax plan were adopted there is a strong case for making public assistance —where needed—supplemental to negative income tax payments.[21] Negative income taxes would be received by all of the poor whereas public assistance is received by only a quarter of all poor persons. However, some public assistance would still need to be paid if no poor families are to be made worse off by the adoption of a negative income tax. For examples, it is estimated that in about two-thirds of the States AFDC payments to families with no income (or other resources) exceeds the maximum negative income tax payment made by a negative tax plan which fills half of a poor family's poverty income gap *(18, pp. 28–29)*.

Table 5 indicates that a sizable percentage of OASDI, unemployment compensation (UC), and veterans' payments are received by nonpoor families. Many families presently receiving these types of transfer income would be made worse off if the social insurance and veterans' programs were eliminated in favor of a negative income tax plan. Yet many of these same families cannot be considered affluent—even if they are not poor. The preceding tables make clear that the present system of income maintenance is not aimed solely at those individuals

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[20] Two-thirds is a surprisingly low figure, given the generally low public assistance standards set by the States.

[21] Green (*7, ch. 7, pp. 86–91.*) This could be accomplished by excluding public assistance from the definition of income for the purpose of calculating negative income tax payments.

TABLE 6.—*Percentage distributoin of transfers to the poor from major programs, 1961* [1]

Item	OASDI	Unemployment compensation	Public assistance	Veterans' pensions and compensation	Other transfers [2]	Total transfer payments
Percentage transfer payment to total transfer payments received by:						
Urban and rural:						
(1) Before-transfer poor families	58.0	7.3	18.4	11.1	5.2	100.0
(2) After-transfer poor families	48.6	7.2	30.1	5.8	8.3	100.0
(3) Families made nonpoor by transfers	65.6	7.4	9.0	15.4	2.6	100.0
Rural:						
(4) Before-transfer poor families	56.5	7.4	14.4	15.1	6.7	100.0
(5) After-transfer poor families	51.2	7.1	23.6	9.2	8.8	100.0
(6) Families made nonpoor by transfers	61.5	7.7	5.4	20.8	4.6	100.0
Urban:						
(7) Before-transfer poor families	58.8	7.3	20.2	9.3	4.4	100.0
(8) After-transfer poor families	47.2	7.3	33.6	3.9	8.0	100.0
(9) Families made nonpoor by transfers	67.2	7.4	10.5	13.2	1.8	100.0

[1] Table 6 is a composite of estimates in lines 10, 11, and 12 of tables 17, 20, and 21, appendix A.

[2] Other transfers include old age, survivors, and disability insurance under the railroad, Federal civilian employee, and State and local employee programs. It also includes workmen's compensation. It excludes cash gifts as well as interest on State, local, and national debt.

and families defined as poor. Our income maintenance system protects chiefly against loss of earning power (OASDI and UC are most important in this respect) and does least for those with some but very limited earning power.

The main advantage of a negative income tax plan is that it protects against limited earning power without eliminating incentives to work. In this respect it complements the social insurance programs and the OEO training, education, and community programs which are aimed at raising the productivity of poor people. The public assistance programs are designed to confine assistance payments to categories of families without an able-bodied worker.[22] However, these families could be handled as well under a negative income tax plan with, perhaps, some supplementing from public assistance. Moreover, a negative income tax is designed to support incentives to work whereas the implicit 100-percent tax rate in public assistance programs will eliminate any monetary incentive to work.[23] Hausman has investigated the earning potential of AFDC mothers and AFDC-UP fathers (*9*). He estimates that 73 percent of AFDC mothers and 41 percent of AFDC-UP fathers were not likely to have increased their total income if they had been employed in 1965 (*9, tables 1, 2*).[24] That is, the earning potential of these families was less than the level of public assistance for which they were eligible. For these families there is no escape from the 100-percent tax rate.[25] Hausman contends that it is important to differentiate between the "employability" and the "self-sufficiency" of public assistance recipients. In his study Hausman produces the results of a survey of 131 New York AFDC mothers. It is estimated that perhaps as many as 40 percent of those surveyed are employable even though most are not self-sufficient (*9, table 3*). This means that, although the assistance recipients might have worked full time, they could not have earned more than what society deems a minimum income as reflected in the maximum public assistance payment for which they are eligible.

Negative Income Taxes and Incentives to Work

While it is clear that a 100-percent tax rate eliminates a monetary incentive to work, it is not at all clear whether a negative income tax plan with a 50-percent negative tax rate involves sufficient monetary rewards to assure that consequent reductions in the supply of work effort are negligible. The problem that arises when one considers a negative tax rate is that there is both a substitution effect and a lump-sum income effect tending to operate in the direction of more leisure and less work. The marginal tax is positive and produces a substitution effect by reducing the price of leisure relative to work. The average tax rate, where an income transfer is concerned, is negative. It will take less work to maintain the same income position as that which was attained before adoption of negative taxes. Thus, the income effect may also be expected to be favorable to more leisure, although the possibility does exist that by raising the income of low income families a negative income tax plan may increase the "taste" for income. If this is the case, the income effect may be favorable to work effort, offsetting wholly, or in part, the leisure-inducing substitution effect.

Studies of the reaction of upper income groups to high average and marginal income tax rates indicate that income taxes have a negligible effect on work effort (*1, 2, 15*).[26] The evidence from these studies implies either that the income effect of the (positive) average tax rate tends to offset the substitution effect produced by high marginal tax rates or that nonpecuniary factors play an important role in the decision by high paid persons whether to work more or less. Unfortunately, the amount of evidence on the reaction of low income groups to high tax rates is quite limited. It is true, of course, that the poor do not pay high (positive) income taxes. But many do receive transfer income from programs which contain high implicit tax rates. Until recently, little attention has been given to the work incentive effects of public transfer programs. However, some recent studies have turned up evidence that the 100-percent "tax rates" in the general assistance programs and the 50- and 100-percent tax rates in the OASDI retirement test do have an adverse effect on the supply of work effort (*3, 5, 6*). Replies to the questionnaire used by Hausman indicate that the AFDC mothers surveyed were well aware of the 100-percent, and sometimes 100-percent-plus, tax rates that they would have to face if they worked.[27]

In summary, whether or not a negative income tax plan would produce work incentive effects great enough to vitiate its otherwise desirable aspects has yet to be determined. Pecuniary incentives to work may be reduced. Moreover, nonpecuniary reasons for work may not be as important for low income groups as they seem to be for high income groups. However, the work incentive effects of a negative income tax plan could not be as undesirable as the effect that would be produced by a plan to help the able-bodied, or working, poor by broadening the public assistance programs, with 100-percent tax rates, to cover all of the poor.

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[22] AFDC-UP and GA are exceptions which tend to prove the rule.

[23] However, to the extent that public assistance supplements negative income tax payments, the 100-percent "tax rate" comes into play. Earnings equal to the amount of supplemented public assistance will be taxed at a 100-percent rate.

[24] Hausman's estimates include the possibility of some unemployment during the year. On the assumption of employment 50–52 weeks, the estimates are 60 percent and 28 percent for AFDC and AFDC-UP families, respectively.

[25] Some States exempt the first dollars of earnings.

[26] A summary of the main findings of these studies may be found in Green (*7, ch. 8*).

[27] Hausman (*9, p. 17*). The "tax rate" may exceed 100 percent if there is a waiting period to get back on the rolls or if the relief recipient loses medical and housing benefits when his earnings disqualify him from receiving public assistance.

Modifying Existing Programs

One alternative to adopting negative income taxation is to modify existing programs in such a way that they offset or negate the advantages of negative taxation. However, there are serious limitations to such a course. The social insurance programs provide benefits, at any one time, to only a fraction of the poor persons and families in the United States. In 1965, there were 5.3 million aged persons in poor households (*19*). In March 1964, there were 1.9 million poor persons in 400,000 poor families headed by an unemployed person (*10*).[28] Much could be done for *some* poor families by "blanketing in" OASDHI payments for the aged, raising OASDHI benefits, and extending coverage and raising payments made under the unemployment insurance programs. But, however desirable these changes would be, they would be beneficial to a minority of poor persons. Moreover, they could be costly changes because our social insurances are wage-related. Benefits are directly related—although not proportionally—to earnings. Efforts to substantially raise the minimum levels of benefits may necessitate raising the benefit levels of all social insurance beneficiaries—nonpoor as well as poor.[29] Also, incentives may be dulled if weekly unemployment insurance payments were to approach the level of weekly earnings—a real possibility when considering families of the working poor.

The high cost of aiding the poor, which is implicit in the social insurance route, is a criticism that has also been aimed at family allowance plans.[30] Almost every other western nation has family allowance systems designed to protect the welfare of children. However, adopted simply as an antipoverty measure, family allowances suffer from the fact that most of the benefits would be received by nonpoor families. This could be remedied if family allowances were income-conditioned as they are in Denmark. In this case, family allowances would be essentially similar to a negative income tax plan designed solely for families with children.

About a year ago the Advisory Council on Public Welfare proposed some thoroughgoing reforms of the public assistance programs. The Advisory Council recommends that all families with income below an established budget level (these levels would be set for each State by the Federal Government) should be entitled to receive assistance which would bring their income up to the budget level (*18, pp. xii–xiii*). Effectively, the present public assistance categories would be abolished and so would the complex means test. A simple means test, a family's "available income," would determine a family's eligibility for and the level of its assistance payments. Need would become the only eligibility requirement. But the 100-percent "tax rate" remains and so might the stigma that many taxpayers and recipients alike associate with public assistance or relief. Despite a recommendation to exempt the first dollars of monthly earnings, the Advisory Council has not avoided the dilemma posed by the 100-percent tax rate. If it lowers the tax rate to, say, 50 percent, then public assistance must be paid to many nonpoor persons if a hard-to-justify equity problem is to be avoided. For example, if a family of four is to be assured $2,500 by the welfare authorities and assistance payments are to be reduced at a rate of 50 cents per dollar of other income (including earnings), then assistance will be paid up to the point at which the family's income reaches $5,000. It would then be hard to justify paying nothing to a four-person family with $4,000 who had no history of receiving public aid. What this example illustrates is that a modification (in the form of a lower tax rate) of the Advisory Council's proposed reform of the public assistance system would make their proposal similar to a negative income tax plan. The main difference would be in the way in which the two are administered. However, the locally administered public assistance programs with their welfare worker-client relationship have not been popular. Perhaps it would be wiser to adopt an impersonally administered income maintenance proposal such as a negative income tax.

Determinants of a Plan's Costs

The cost of different negative income tax plans (and also social dividend plans) depends on the magnitudes of the plan's three basic variables: (1) the income guarantee, (2) the tax rate, and (3) the break-even level of income. The magnitude of any two of these variables determines the magnitude of the third variable.[31] The higher the income guarantee and the lower the tax rate(s), the higher the break-even level of income and the greater the cost of the program.

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[28] This does not include unemployed unrelated individuals.

[29] One estimate is that it would cost $11 billion to pull half of the aged poor out of poverty via the social insurance route. Only $3 billion of the $11 billion would be received by aged families who, before receiving the increased benefits, are judged as poor. The estimate was made by a participant at a Brookings Institution conference on the negative income tax, June 8–9, 1966. Green (*7, ch. 10, p. 173*).

[30] Recently Daniel Moynihan and Alvin Schorr have advanced proposals for family allowances. Moynihan's proposal, made before a Congressional Committee, is outlined in *The New York Times Magazine*, Sunday, Feb. 5, 1967. Schorr's proposal is contained in an article entitled "Against a Negative Income Tax," *The Public Interest*, No. 5, Fall 1966, pp. 110–117. Moynihan estimates the cost of his plan at $9 billion while Schorr's would cost $12 billion annually. Perhaps only a quarter of the benefits would be received directly by poor families. However, if income taxes are used to finance family allowances, almost all of the cost will be financed by nonpoor families—many of whom have children. In real terms, this raises the percentage of benefits received by poor families.

The "inevitable arithmetic" produced by the three basic variables involves the policymaker in some difficult trade-offs. Suppose adequacy is represented by a high income guarantee, work incentives by a low tax rate, and "efficiency" or low costs by a break-even level of income which confines payments largely or wholly to poor families. It is clear that it is not possible to attain each of these desirable objectives—adequacy, incentives, and efficiency—in one plan. One objective must be abandoned and which one that is will largely determine how much society must pay in providing a minimum of income security for all of its members.

Cost Estimates

Negative income taxation focuses upon filling the poverty income gap. I have estimated, using Census data, that the poverty income gap was $11.4 billion in 1965. Clearly, it will cost more than $11.4 billion to fill the poverty gap. Simply bringing the income of poor families up to the family's poverty line will place a 100-percent tax on the family's other income, including earnings. The work disincentive effects produced by such a plan might raise the plan's cost as high as $20 billion—or even more.[32] It is this problem that negative taxation is supposed to avoid.

First version negative income tax plans are designed to fill approximately one-half of the poverty gap.[33] On the assumption that these plans will not have important work disincentive effects they are estimated to cost the Federal Government between $5 and $7 billion, after adjusting for reductions in public assistance.[34] In contrast are social dividend plans which fill the poverty income gap by guaranteeing (and paying) all families a poverty-free minimum income. If a social dividend plan were financed by a flat 33⅓-percent tax rate on total money income it would have had a net cost, in 1964, of between $41 and $51 billion.[35]

Second version negative income tax plans such as the proposals of James Tobin and Earl Rolph cost more than the first version negative income tax plans even though the income gaurantees are similar. The explanation lies in the lower level of the tax rates adopted by the Tobin and Rolph plans, which raise the break-even levels in their proposals well above the poverty lines or the value of exemptions and minimum standard deductions. Tobin has estimated the cost of his plan at $13.9 billion using 1962 income tax data and I have estimated its cost using 1964 Census data at close to $11 billion.[36] (In both cases the data was superimposed on the 1965 income tax code.) Rolph did not provide any cost estimate for his plan, but on the basis of other estimates that I have made I would estimate the cost of his proposal at about $15 billion.

Although these estimates lack great preciseness they do give some idea of the relative dimensions of the different plans.[37] These estimates do make adjustment for reduction in public assistance, but the larger the plan, the less important is this offsetting cost reduction. On the other hand, the higher the income guarantee the easier it is to justify reducing expenditures made by other programs designed to maintain income security. In this respect a plan of the social dividend type is qualitatively as well as quantitatively different from a negative income tax plan which fills half of the poverty gap. The large plan means not only a restructuring of the tax system but it also throws into question the raison d'etre of many social welfare programs. The small plan, in contrast, necessitates no major revision in the positive income tax system, and only public assistance would be significantly reduced as a result. The second version, intermediate cost, negative income tax plans fall somewhere in between. They necessitate some important changes in the income tax system but, with the exception of public assistance, they do not justify major reductions in other public income transfer programs.

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[31] The relationship is: $B = \frac{Yg}{t}$ where B is the break-even level of income; Yg is the income guarantee; and t = the tax rate(s).

[32] Both BLS and Census data indicate that approximately half of the income of poor families is earnings while the other half consists of public transfer payments (a little over 40 percent) and property income (a little less than 10 percent). Census data for 1965 indicate that the total money income of the poor amounted to $15.9 billion. Approximately half—or $8 billion—is earnings which might be lost if taxed at a 100-percent rate. In addition, families with income just above the poverty lines might stop work in return for a guarantee of income equal to poverty line levels.

[33] These negative tax plans are the type proposed originally by Friedman (*4*) and by Lampman [see Green and Lampman (*8, pp. 128–129*).]

[34] Detailed estimates for several plans are presented in Green (*7, table 9–1*). All of these estimates are based on Census data for 1964.

[35] The "net" cost of a social dividend plan is the amount of income redistributed from families with income above the break-even levels to families with income below the break-even levels of income. By raising the tax rate on income below the break-even levels, the net cost can be reduced. For example, a social dividend plan with a 50-percent tax rate applied to income below the break-even levels would cost from $25 to $31 billion and would necessitate a 15-percent tax rate on money income above the break-even levels of income for its financing. The upper cost figures are based on Census data unadjusted for underreporting of income. The lower cost figures represent an adjustment for underreporting of income.

[36] The difference can be explained in part by the fact that the Census definition of total money income is broader than the adjusted gross income definition of income used by the Internal Revenue Service. Moreover, the Census family unit is different from the income tax unit. Also, children who work and file an income tax return may also be declared dependents on their parents' tax return. This would tend to overstate the number of persons eligible for net allowances in Tobin's calculation. Offsetting these is Tobin's exclusion of the aged from his plan.

[37] Perhaps greater preciseness would be misleading.

If a negative income tax plan were adopted what percentage of the benefits would be received by rural families and what percentage by urban families? Negative income tax plans focus on filling, at least partially, the poverty income gap. Therefore estimates of the rural and urban poverty gaps would provide a basis for determining the distribution of payments. Fortunately, BLS data allow a calculation of the rural and urban poverty income gaps. Unfortunately, the BLS and Census data give conflicting views of the size of the poverty income gap in 1961.[38] However, I will make the assumption that the *percentages* derived from BLS data hold for the Census data.

In 1961, 44 percent of all poor families (measured on an after-transfer basis) lived in rural areas. The poverty income gap of poor rural families was 45 percent of the poverty income gap of all poor families.[39] In 1965, the poverty income gap, calculated from Census data, was $11.4 billion. If, in 1965, the rural poverty gap was still 45 percent of the total then the rural poverty gap was $5.1 billion in 1965. A negative income tax plan paying allowances equal to 50 percent of the poverty gap of poor families would have channeled $2.55 billion to rural families in 1965. Urban families would have received $3.15 billion.

Summary

This paper sets the concept of a negative income tax against a background of what income maintenance did in 1961 for the rural and urban poor. The estimates in table 2, based on BLS data, indicate that in 1961 public transfer income contributed to lifting better than a third of the before-transfer poor families out of poverty. But many families remained in poverty. The incidence of poverty was greater in rural areas than in urban areas. Estimates in table 3 suggest that upwards of 25 percent of after-transfer poor families did not receive any public transfer income in 1961. Table 4 indicates that half of public transfer income is received by nonpoor (before receiving transfers) families, reflecting the fact that an income maintenance system does more—and is designed to do more—than prevent poverty.

In the preceding pages I have assumed that low income, or poor, people should be provided with more income protection than they now receive. The paper does not present a case for such a policy. If a policy of increasing income transfers to poor people is adopted, then one important means of doing so is negative income taxation. Perhaps the strength of negative income taxation lies mainly in the weakness of alternative methods of improving income maintenance. There are, of course, certain technical and administrative aspects of negative income taxation—not discussed in the paper—that constitute weaknesses as well as strengths in this type of plan. But the weaknesses of alternative plans—except, perhaps, doing nothing more in terms of income maintenance—seem greater. In any case, there are trade-offs to be made and costs to be borne. Negative income taxation, by specifying the magnitudes of three basic variables, makes the trade-offs explicit. This certainly is one of its strengths.

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[38] The poverty income gap calculated from 1961 Census Current Population Survey data was $15.0 billion. The gap calculated from BLS was $7.6 billion. Neither figure was adjusted for lower rural farm thresholds. Appendix B describes the definitions used by the BLS Consumer Expenditure Survey and where the BLS consumer unit differs from the Census family. Presumably, a major portion of the difference between the Census and BLS poverty gaps can be explained in terms of different definitions.

[39] Using 1964 Census data I have calculated the poverty income gap of farm families to be about 10 percent of the total poverty gap. [Green (*7, ch. 9, table 9–3, p. 147*).]

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Appendix A

The tables in this appendix provide the detail behind the estimates in tables 2 through 6. The source of the data from which these estimates were made is: U. S. Department of the Treasury, Office of Tax Analysis, based on special tabulations of the Survey of Consumer Expenditures, 1960–61, of the Bureau of Labor Statistics, U.S. Department of Labor. Appendix B describes some of the definitions used by the Bureau of Labor Statistics in making its survey.

TABLE 7.—*Effect of transfer payments in reducing poverty: Urban and rural*

Type of family (number of families and persons in thousands)	Members in family unit						Total families	Total persons in families
	1	2	3	4	5	6 or more		
(1) All families in population	8,488	16,656	9,805	9,019	5,621	5,715	55,304	175,401
(2) Before-transfer poor families	3,945	4,487	1,365	774	777	1,820	13,168	36,735
(3) After-transfer poor families	2,611	2,350	790	567	568	1,510	8,396	25,359
(4) Families made nonpoor by transfer (2) − (3)	1,334	2,137	575	207	209	310	4,772	11,376
(5) Percentage reduction in poor families [(4) ÷ (2)] × 100	33.8	47.6	42.1	26.7	26.9	17.0	36.2	31.0
(6) Before-transfer poor as percentage of all families [(2) ÷ (1)] × 100	46.5	26.9	13.9	8.6	13.8	31.8	23.8	20.9
(7) After-transfer poor as percentage of all families [(3) ÷ (1)] × 100	30.8	14.1	8.1	6.3	10.1	26.4	15.2	14.5

TABLE 8.—*Effect of transfer payments in reducing poverty: Rural nonfarm*

Type of family (number of families and persons in thousands)	Members in family unit						Total families	Total persons in families
	1	2	3	4	5	6 or more		
(1) All families in population	1,406	3,548	1,954	1,808	1,327	1,620	11,663	39,571
(2) Before-transfer poor families	970	1,459	455	233	250	705	4,072	12,370
(3) After-transfer poor families	765	924	290	180	195	630	2,984	9,588
(4) Families made nonpoor by transfer (2) − (3)	205	535	165	53	55	75	1,088	2,782
(5) Percentage reduction in poor families [(4) ÷ (2)] × 100	21.1	36.7	36.3	22.0	25.0	10.6	26.7	22.5
(6) Before-transfer poor as percentage of all families [(2) ÷ (1)] × 100	69.0	41.1	23.3	12.9	18.8	43.5	34.9	31.3
(7) After-transfer poor as percentage of all families [(3) ÷ (1)] × 100	54.4	26.0	14.8	9.9	14.7	38.9	25.6	24.2

TABLE 9.—*Effect of transfer payments in reducing poverty: Rural farm*

Type of family (number of families and persons in thousands)	Members in family unit						Total families	Total persons in families
	1	2	3	4	5	6 or more		
(1) All families in population	222	1,036	671	566	367	651	3,513	12,963
(2) Before-transfer poor families	115	362	148	102	70	200	997	3,441
(3) After-transfer poor families	86	204	92	86	58	175	701	2,629
(4) Families made nonpoor by transfer (2) − (3)	29	158	56	16	12	25	296	812
(5) Percentage reduction in poor families [(4) ÷ (2)] × 100	25.2	43.6	37.8	15.7	17.1	12.5	29.7	23.6
(6) Before-transfer poor as percentage of all families [(2) ÷ (1)] × 100	51.8	34.9	22.1	18.0	19.1	30.7	28.4	26.5
(7) After-transfer poor as percentage of all families [(3) ÷ (1)] × 100	38.7	19.7	13.7	15.2	15.8	26.9	19.9	20.3

TABLE 10.—*Effect of transfer payments in reducing poverty: Rural*

Type of family (number of families and persons in thousands)	Members in family unit						Total families	Total persons in families
	1	2	3	4	5	6 or more		
(1) All families in population	1,628	4,584	2,625	2,374	1,694	2,271	15,176	52,534
(2) Before-transfer poor families	1,085	1,821	603	335	320	905	5,069	15,811
(3) After-transfer poor families	851	1,128	382	266	253	805	3,685	12,217
(4) Families made nonpoor by transfer (2) − (3)	234	693	221	69	67	100	1,384	3,594
(5) Percentage reduction in poor families [(4) ÷ (2)] × 100	21.6	38.1	36.7	20.6	20.9	11.0	27.3	22.7
(6) Before-transfer poor as percentage of all families [(2) ÷ (1)] × 100	66.6	39.7	23.0	14.1	19.0	39.9	33.4	30.1
(7) After-transfer poor as percentage of all families [(3) ÷ (1)] × 100	52.3	24.6	14.6	11.2	14.9	35.4	24.3	23.3

TABLE 11.—*Effect of transfer payments in reducing poverty: Urban*

Type of family (number of families and persons in thousands)	Members in family unit						Total families	Total persons in families
	1	2	3	4	5	6 or more		
(1) All families in population	6,860	12,072	7,180	6,645	3,927	3,444	40,128	122,867
(2) Before-transfer poor families	2,860	2,666	762	439	457	915	8,099	20,924
(3) After-transfer poor families	1,760	1,222	408	301	315	705	4,711	13,142
(4) Families made nonpoor by transfer (2) − (3)	1,100	1,444	354	138	142	210	3,388	7,782
(5) Percentage reduction in poor families [(4) ÷ (2)] × 100	38.5	54.2	46.5	31.4	31.1	23.0	41.8	37.2
(6) Before-transfer poor as percentage of all families [(2) ÷ (1)] × 100	41.7	22.1	10.6	6.6	11.6	26.6	20.2	17.0
(7) After-transfer poor as percentage of all families [(3) ÷ (1)] × 100	25.7	10.1	5.7	4.5	8.0	20.5	11.7	10.7

TABLE 12.—*Families receiving transfer income: Urban and rural, 1961*

Item	Public benefits and pensions	Public social assistance and private	Veterans' pensions and compensation	Range of totals
Receiving transfer income (in thousands):				
(1) All receiving transfers	17,712	2,475	3,634	17,712–23,821
(2) Before-transfer poor	8,175	2,184	1,355	8,175–11,714
(3) After-transfer poor	4,261	1,683	405	4,261–6,349
(4) Made nonpoor by transfers	3,914	501	950	4,772
Percentage receiving transfer income:				
(5) All receiving transfers	32.0	4.5	6.6	32.0–43.1
(6) Before-transfer poor	62.1	16.6	10.3	62.1–89.0
(7) After-transfer poor	50.7	20.0	4.8	50.7–75.5
(8) Made nonpoor by transfers	82.0	10.5	19.9	100.0

TABLE 13.—*Families receiving transfer income: Rural nonfarm, 1961*

Item	Public benefits and pensions	Public social assistance and private	Veterans' pensions and compensation	Range of totals
Receiving transfer income (in thousands):				
(1) All receiving transfers	4,241	636	877	4,241–5,754
(2) Before-transfer poor	2,443	568	466	2,443–3,477
(3) After-transfer poor	1,496	499	186	1,496–2,181
(4) Made nonpoor by transfers	947	69	280	947–1,296
Percentage receiving transfer income:				
(5) All receiving transfers	36.4	5.5	7.5	36.4–49.4
(6) Before-transfer poor	60.0	13.9	11.4	60.0–85.3
(7) After-transfer poor	50.1	16.7	6.2	50.1–73.0
(8) Made nonpoor by transfers	87.0	6.3	25.7	100.0

TABLE 14.—*Families receiving transfer income: Rural farm, 1961*

Item	Public benefits and pensions	Public social assistance and private	Veterans' pensions and compensation	Range of totals
Receiving transfer income (in thousands):				
(1) All receiving transfers	852	88	215	852–1,155
(2) Before-transfer poor	399	66	95	399–560
(3) After-transfer poor	176	46	27	176–249
(4) Made nonpoor by transfers	223	20	68	223–311
Percentage receiving transfer income:				
(5) All receiving transfers	24.3	2.5	6.1	24.3–32.9
(6) Before-transfer poor	40.0	6.6	9.5	40.0–56.1
(7) After-transfer poor	25.1	6.6	3.9	25.1–35.6
(8) Made nonpoor by transfers	75.3	6.7	23.0	100.0

TABLE 15.—*Families receiving transfer income: Rural, 1961*

Item	Public benefits and pensions	Public social assistance and private	Veterans' pensions and compensation	Range of totals
Receiving transfer income (in thousands):				
(1) All receiving transfers	5,093	724	1,092	5,093–6,909
(2) Before-transfer poor	2,842	634	561	2,842–4,037
(3) After-transfer poor	1,672	545	213	1,672–2,430
(4) Made nonpoor by transfers	1,170	89	348	1,170–1,607
Percentage receiving transfer income:				
(5) All receiving transfers	33.6	4.8	7.2	33.6–45.6
(6) Before-transfer poor	56.1	12.5	11.1	56.1–79.7
(7) After-transfer poor	45.4	14.8	5.8	45.4–66.0
(8) Made nonpoor by transfers	84.5	6.4	25.1	100.0

TABLE 16.—*Families receiving transfer income: Urban, 1961*

Item	Public benefits and pensions	Public social assistance and private	Veterans' pensions and compensation	Range of totals
Receiving transfer income (in thousands):				
(1) All receiving transfers	12,619	1,751	2,542	12,169–16,462
(2) Before-transfer poor	5,333	1,550	794	5,333–7,677
(3) After-transfer poor	2,589	1,138	192	2,589–3,919
(4) Made nonpoor by transfers	2,744	412	602	3,388
Percentage receiving transfer income:				
(5) All receiving transfers	31.4	4.4	6.3	31.4–42.1
(6) Before-transfer poor	65.8	19.1	9.8	65.8–94.7
(7) After-transfer poor	54.9	24.1	4.1	54.9–83.1
(8) Made nonpoor by transfers	81.0	12.2	17.8	100.0

TABLE 17.—*Transfer income from major programs received by rural and urban poor, 1961*

Transfer payments	OASDI	Unemployment compensation	Public assistance	Veterans' pensions and compensation	Other transfers	Totals	
						Without cash gifts	Including cash gifts
Payments (in $ millions) received by:							
(1) All families	12,145	2,684	2,591	3,226	3,893	24,539	27,059
(2) Before-transfer poor families	7,563	956	2,393	1,450	672	13,034	13,718
(3) After-transfer poor families	2,819	417	1,744	337	481	5,798	6,084
(4) Families made nonpoor by transfer	4,744	539	649	1,113	191	7,236	7,634
Percentage total transfers received by:							
(5) All families	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(6) Before-transfer poor families	62.3	35.6	92.4	44.9	17.3	53.1	50.7
(7) After-transfer poor families	23.2	15.5	67.3	10.4	12.4	23.6	22.5
(8) Families made nonpoor by transfers	39.1	20.1	25.0	34.5	4.9	29.5	28.2
Percentage transfer payments to total transfer payments received by:							
(9) All families	49.5	10.9	10.6	13.1	15.9	100.0	......
(10) Before-transfer poor families	58.0	7.3	18.4	11.1	5.2	100.0	......
(11) After-transfer poor families	48.6	7.2	30.1	5.8	8.3	100.0	......
(12) Families made nonpoor by transfers	65.6	7.4	9.0	15.4	2.6	100.0	......
(13) Percentage of transfers received by before-transfer poor families which contributed to making them nonpoor (4)÷(2)	62.7	56.4	27.1	76.8	28.4	55.5	55.6

TABLE 18.—*Transfer income from major programs received by the rural nonfarm poor, 1961*

Transfer payments	OASDI	Unemployment compensation	Public assistance	Veterans' pensions and compensation	Other transfers	Totals	
						Without cash gifts	Including cash gifts
Payments (in $ millions) received by:							
(1) All families	2,736	636	577	876	759	5,584	5,978
(2) Before-transfer poor families	1,989	280	537	529	260	3,595	3,808
(3) After-transfer poor families	937	138	453	171	169	1,868	1,963
(4) Families made nonpoor by transfer	1,052	142	84	358	91	1,727	1,845
Percentage total transfers received by:							
(5) All families	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(6) Before-transfer poor families	72.7	44.0	93.1	60.4	34.3	64.4	63.7
(7) After-transfer poor families	34.2	21.7	78.5	19.5	22.3	33.5	32.8
(8) Families made nonpoor by transfers	38.5	22.3	14.6	40.9	12.0	30.9	30.9
Percentage transfer payments to total transfer payments received by:							
(9) All families	49.0	11.4	10.3	15.7	13.6	100.0	......
(10) Before-transfer poor families	55.3	7.8	14.9	14.7	7.2	100.0	......
(11) After-transfer poor families	50.2	7.4	24.3	9.2	9.0	100.0	......
(12) Families made nonpoor by transfers	60.9	8.2	4.9	20.7	5.3	100.0	......
(13) Percentage of transfers received by before-transfer poor families which contributed to making them nonpoor (4)÷(2)	52.9	50.6	15.7	67.7	34.9	48.0	48.5

TABLE 19.—*Transfer income from major programs received by rural farm poor, 1961*

Transfer payments	OASDI	Unemployment compensation	Public assistance	Veterans' pensions and compensation	Other transfers	Totals: Without cash gifts	Totals: Including cash gifts
Payments (in $ millions) received by:							
(1) All families	609	79	65	205	73	1,031	1,102
(2) Before-transfer poor families	346	25	58	95	17	541	557
(3) After-transfer poor families	112	7	31	18	11	179	189
(4) Families made nonpoor by transfer	234	18	28	77	6	363	368
Percentage total transfers received by:							
(5) All families	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(6) Before-transfer poor families	56.8	31.6	89.2	46.3	23.3	52.5	50.5
(7) After-transfer poor families	18.4	8.9	47.7	8.8	15.1	17.4	17.2
(8) Families made nonpoor by transfers	38.4	22.8	43.1	37.6	8.2	35.2	33.4
Percentage transfer payments to total transfer payments received by:							
(9) All families	59.1	7.7	6.3	19.9	7.1	100.0	......
(10) Before-transfer poor families	64.0	4.6	10.7	17.6	3.1	100.0	......
(11) After-transfer poor families	62.6	3.9	17.3	10.1	6.1	100.0	......
(12) Families made nonpoor by transfers	64.5	5.0	7.7	21.2	1.7	100.0	......
(13) Percentage of transfers received by before-transfer poor families which contributed to making them nonpoor (4) ÷ (2)	67.7	72.2	47.6	81.0	33.9	67.0	66.1

TABLE 20.—*Transfer income from major programs received by rural poor, 1961*

Transfer payments	OASDI	Unemployment compensation	Public assistance	Veterans' pensions and compensation	Other transfers	Totals: Without cash gifts	Totals: Including cash gifts
Payments (in $ millions) received by:							
(1) All families	3,345	715	642	1,081	832	6,615	7,080
(2) Before-transfer poor families	2,335	305	595	624	277	4,136	4,365
(3) After-transfer poor families	1,049	145	484	189	180	2,047	2,152
(4) Families made nonpoor by transfer	1,286	160	111	435	97	2,089	2,213
Percentage total transfers received by:							
(5) All families	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(6) Before-transfer poor families	69.8	42.7	92.7	57.7	33.3	62.5	61.7
(7) After-transfer poor families	31.4	20.3	75.4	17.5	21.6	30.9	30.4
(8) Families made nonpoor by transfers	38.4	22.4	17.4	40.2	11.7	31.6	31.3
Percentage transfer payments to total transfer payments received by:							
(9) All families	50.6	10.8	9.7	16.3	12.6	100.0	......
(10) Before-transfer poor families	56.5	7.4	14.4	15.1	6.7	100.0	......
(11) After-transfer poor families	51.2	7.1	23.6	9.2	8.8	100.0	......
(12) Families made nonpoor by transfers	61.5	7.7	5.4	20.8	4.6	100.0	......
(13) Percentage of transfers received by before-transfer poor families which contributed to making them nonpoor (4) ÷ (2)	55.1	52.5	18.8	69.7	35.0	50.5	50.7

TABLE 21.—*Transfer income from major programs received by urban poor, 1961*

Transfer payments	OASDI	Unemployment compensation	Public assistance	Veterans' pensions and compensation	Other transfers	Totals	
						Without cash gifts	Including cash gifts
Payments (in $ millions) received by:							
(1) All families	8,800	1,969	1,949	2,145	3,061	17,924	19,979
(2) Before-transfer poor families	5,228	651	1,798	826	395	8,898	9,353
(3) After-transfer poor families	1,770	272	1,260	148	301	3,751	3,932
(4) Families made nonpoor by transfer	3,458	379	538	678	94	5,146	5,421
Percentage total transfers received by:							
(5) All families	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(6) Before-transfer poor families	59.4	33.1	92.3	38.5	12.9	49.6	46.8
(7) After-transfer poor families	20.1	13.8	64.6	6.9	9.8	20.9	19.7
(8) Families made nonpoor by transfers	39.3	19.2	27.6	31.6	3.1	28.7	27.1
Percentage transfer payments to total transfer payments received by:							
(9) All families	49.1	11.0	10.9	12.0	17.1	100.0	......
(10) Before-transfer poor families	58.8	7.3	20.2	9.3	4.4	100.0	......
(11) After-transfer poor families	47.2	7.3	33.6	3.9	8.0	100.0	......
(12) Families made nonpoor by transfers	67.2	7.4	10.5	13.2	1.8	100.0	......
(13) Percentage of transfers received by before-transfer poor families which contributed to making them nonpoor (4)÷(2)	66.1	58.2	29.9	82.1	23.8	57.8	58.0

Appendix B

The data used in the preceding tables were drawn from the 1960–61 BLS Survey of Consumer Expenditures. Detailed information on 9,476 families residing in 66 urban places in 50 States in 1960 and 1961 were used. Data on 2,285 rural nonfarm and 1,967 rural farm families were collected by BLS and USDA. These made up a sample size of 13,728 families and single consumers (*21*).

The CES (Survey of Consumer Expenditures) classification of families by place of residence follows the definitions adopted for the 1960 Census of Population. The 9,476 urban families compared approximately 75 percent of the 1960, and 77 percent of the 1961 urban samples, while the rural samples were collected in 1962 for 1961. The 1961 samples (both urban and rural) were further weighted by the adjusted 1960 census population to correct for definitional differences between the census and the CES universe (*20*).

The rural segment comprises all persons living: (1) outside incorporated places of 2,500 population or more, and (2) outside the densely settled (urbanized) areas immediately adjacent to cities of 50,000 population or more. Rural-farm population includes all rural residents on farms, and the rural-nonfarm population comprises the remaining rural population.[1]

The definition of family in the CES is different from that in the Census. CES refers to a consumer unit which comprises (1) a group of people usually living together who pooled their income and drew from a common fund for their major items of expenses, or (2) a person living alone or in a household with others but who was financially independent. The Census family consists of two or more persons living in the same household who are related to each other by blood, marriage, or adoption. Thus, a Census family may consist of several CES families; and, on the other hand, a CES family may consist of more than one Census family, although this is rarely the case.

Furthermore, the CES family is not the same as a "household" defined by the Census Bureau in the sense that a household may contain more than one family. However, they may be the same if the household is composed of a group of unrelated persons or one person living alone who is financially independent.

Another unique aspect of the CES is its definition of family size. The size of family is the number of "equivalent" full-year members based on the total number of weeks during which both full-year and part-year members belonged to the family in the survey year, divided by 52 weeks. Thus, a family of 5 where 2 of the members only lived one-half year with the family during the survey year would be counted as a family of 4. This definition of family size was adopted so as to establish some standards for family size when calculating the family's consumption expenditures.

ACKNOWLEDGMENTS

The author acknowledges the helpful assistance of Edward Y. Long. Mr. Long assisted in preparing the appendix tables and put together the information in Appendix B.

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[1] A farm, according to the 1960 census, is a place of 10 acres or more from which the sale of crops, livestock products, etc. (and/or government farm program payments) amounted to $50 or more; or a place of less than 10 acres with sales (and/or payments) of $250 or more.

Appendix

Other Papers Prepared for the Commission

The Lincoln Parish Family Planning Program and Its Implications for Reducing Reproductive Wastage in the Rural Poor. Joseph D. Beasley (Tulane University).

White Americans in Rural Poverty. Alan R. Bird and John L. McCoy (USDA).

Distribution of Planned Investments and Estimated Benefits of Small Watershed Projects Authorized Under Public Law 566. Arthur B. Daugherty (USDA).

Experience and Potential Economic Effects of the Resource Conservation and Development Projects Program. Dwight M. Gadsby (USDA).

Rural Poverty of Mexican Americans. Ralph Guzman (UCLA).

Rural Poverty and Adult Education. Warren C. Haggstrom (UCLA).

Renewal—Urban and Rural: A Program for Human Settlement. Bernard R. Hoffnar (USDA).

Rural Family Planning Programs. Frederick S. Jaffe (Planned Parenthood World Population, N.Y.).

The Small Industrial City as a Source of Employment and Residence for Migrants. Melvin Lurie (Univ. of Wis.).

Culture Change and the American Indian Problem. Gordon Macgregor (OEO).

Indian Education. Carl Marburger (BIA).

Community Development for Rural America: A Voluntary-Cooperative Approach. Selz C. Mayo (NCS).

Rural Education in the United States. W. D. McClurkin (George Peabody College for Teachers).

The Position of the Pulp and Paper and Related Industries in the Economic Development of the South. I. James Pikl, Jr. (Univ. of Wyo.).

The Role of the State and Land-Grant University Extension Services in Eliminating Rural Poverty. C. B. Ratchford (Univ. of Mo.).

Power Based, Independent, Democratic Community Organizations. Robert D. Smith (Eckington Commission).

Technological Trends in Selected Industries Affecting Rural Workers. Edgar Weinberg (BLS).

Urban-Rural Differences in Quality of Schooling. Finis R. Welch (Southern Methodist Univ.).

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